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No. 4

CATALOGUE
1929-1930



Containing general information concerning the University.
Announcements for the Scholastic Year 1929-30
and Records of 1928-29

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Calendar for 1929, 1930, 1931

THE UNIVERSITY of MARYLAND

CATALOGUE

1929-1930



*Containing general information concerning the University,
Announcements for the Scholastic Year 1929-1930,
and Records of 1927-1928.*

*Facts, conditions, and personnel herein set forth are as
existing at the time of publication, April, 1929.*

1929

JULY

S	M	T	W	T	F	S
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AUGUST

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SEPTEMBER

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DECEMBER

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1930

JANUARY

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JUNE

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1931

JANUARY

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JUNE

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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

UNIVERSITY CALENDAR

1929-1930

COLLEGE PARK

First Semester

1929.		
Sept. 17-18	Tuesday-Wednesday	Registration for Freshmen.
Sept. 19	Thursday	Upper Classmen complete registration.
Sept. 20	Friday	Instruction for first semester begins.
Sept. 26	Thursday	Last day to change registration or to file schedule card without fine.
Nov. 28	Thursday	Thanksgiving Day. Holiday.
Dec. 14	Saturday, 12.10 p.m.	Christmas Recess begins.

1930.		
Jan. 3	Friday, 8.20 a.m.	Christmas Recess ends.
Jan. 25-Feb. 1	Saturday-Saturday	First semester examinations.

Second Semester

Jan. 20-24	Monday-Friday	Registration for second semester.
Feb. 3	Monday	Last day to complete registration for second semester without payment of late registration fee.
Feb. 4	Tuesday, 8.20 a.m.	Instruction for second semester begins.
Feb. 10	Monday	Last day to change registration or to file schedule card without fine.
Feb. 22	Saturday	Washington's Birthday. Holiday.
Mar. 25	Tuesday	Observance of Maryland Day.
Apr. 15-Apr. 23	Tuesday, 4.10 p.m. Wednesday, 8.20 a.m.	Easter Recess.
May 19-23	Monday-Friday	Registration for first semester, 1930-1931.
May 28-June 4	Wednesday-Wednesday	Second semester examinations for Seniors.
May 30	Friday	Memorial Day. Holiday.
June 2-7	Monday-Saturday	Second semester examinations.
June 8	Sunday, 11 a.m.	Baccalaureate Sermon.
June 9	Monday	Class Day.
June 10	Tuesday, 11 a.m.	Commencement.

Summer Term

June 16-21	Monday-Saturday	Rural Women's Short Course.
June 25	Wednesday	Summer School begins.
Aug. 5	Tuesday	Summer School ends.
Aug. 7-12	Thursday-Tuesday	Boys' and Girls' Club Week.

BALTIMORE (PROFESSIONAL SCHOOLS)

First Semester

1929.		
Sept. 23	Monday	Registration begins.
Sept. 30	Monday	Instruction begins with the first scheduled period.
Oct. 7	Monday	Last day to register without paying fine of \$5.00.
Nov. 28	Thursday	Thanksgiving.
Dec. 21	Saturday	Christmas recess begins after the last scheduled period.

1930.		
Jan. 6	Monday	Instruction resumed with the first scheduled period.
Jan. 25	Saturday	First semester ends after the last scheduled period.

Second Semester

Jan. 13	Monday	Registration begins for second semester.
Jan. 27	Monday	Instruction begins with the first scheduled period.
Feb. 3	Saturday	Last day to register without paying fine of \$5.00.
Feb. 22	Saturday	Holiday (Washington's Birthday).
Apr. 17	Thursday	Easter recess begins after the last scheduled period.
Apr. 22	Tuesday	Instruction resumed with the first scheduled period.
June 7	Saturday	Commencement.

BOARD OF REGENTS

SAMUEL M. SHOEMAKER, Chairman.....	1924-1933
Eccleston, Baltimore County	
JOHN M. DENNIS, Treasurer.....	1923-1932
Union Trust Co., Baltimore	
DR. FRANK J. GOODNOW.....	1922-1931
Oak Place and Charles Street Avenue	
JOHN E. RAINE.....	1921-1930
413 East Baltimore Street, Baltimore	
CHARLES C. GELDER.....	1920-1929
Princess Anne, Somerset County	
DR. W. W. SKINNER, Secretary.....	1927-1936
Kensington, Montgomery County	
E. BROOKE LEE (Appointed 1927).....	1926-1935
Silver Spring, Montgomery County	
HENRY HOLZAPFEL, JR.....	1925-1934
Hagerstown, Washington County	
GEORGE M. SHRIVER.....	1928-1933
Old Court Road, Baltimore.	

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RAYMOND A. PEARSON, M.S., D. Agr., LL.D., President.

H. C. BYRD, B.S., Assistant to the President; Director of Athletics.

H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station; Dean of the College of Agriculture.

T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.

A. N. JOHNSON, S.B., D. Eng., Dean of the College of Engineering.

T. H. TALIAFERRO, C.E., Ph.D., Dean of the College of Arts and Sciences.

J. M. H. ROWLAND, M.D., Dean of the School of Medicine.

HENRY D. HARLAN, LL.D., Dean of the School of Law.

ROBERT H. FREEMAN, A.M., LL.B., Assistant Dean of the School of Law.

E. FRANK KELLY, Phar.D., Advisory Dean of the School of Pharmacy.

ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.

T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.

J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.

W. S. SMALL, Ph.D., Dean of the College of Education.

M. MARIE MOUNT, M.A., Dean of the College of Home Economics.

C. O. APPLEMAN, Ph.D., Dean of the Graduate School.

ADELE H. STAMP, M.A., Dean of Women.

R. S. LYTLE, Major Inf., Professor of Military Science and Tactics.

MAUDE F. MCKENNEY, Financial Secretary.

W. M. HILLEGEIST, Registrar.

ALMA H. PREINKERT, M.A., Acting Registrar.

H. L. CRISP, M.M.E., Superintendent of Buildings.

T. A. HUTTON, A.B., Purchasing Agent and Manager of Students' Supply Store.

GRACE BARNES, B.S., B.L.S., Librarian (College Park).

RUTH LEE BRISCOE (MRS.), Librarian (Baltimore).

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 C. O. APPLEMAN, Ph.D., Dean of the Graduate School, Chairman.
 E. S. JOHNSTON, Ph.D., Secretary.
 H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station.
 C. B. BROUGHTON, Ph.D., Professor of Agricultural Chemistry.
 A. N. JOHNSON, D.Eng., Professor of Highway Engineering.
 T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics.
 E. N. CORY, Ph.D., Professor of Entomology.
 H. C. HOUSE, Ph.D., Professor of English and English Literature.
 H. F. COTTERMAN, M.A., Professor of Agricultural Education.
 DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.
 E. C. AUCHTER, Ph.D., Professor of Horticulture.
 M. MARIE MOUNT, M.A., Professor of Home and Institutional Management.
 GLENN L. JENKINS, Ph.D., Professor of Pharmaceutical Chemistry.

THE UNIVERSITY SENATE

RAYMOND A. PEARSON, M.S., D.Agr., LL.D., President of the University.
 H. C. BYRD, B.S., Assistant to the President; Director of Athletics.
 H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station; Dean of the College of Agriculture.
 T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.
 A. N. JOHNSON, S.B., D.Eng., Dean of the College of Engineering.
 T. H. TALIAFERRO, C.E., Ph.D., Dean of the College of Arts and Sciences.
 J. M. H. ROWLAND, M.D., Dean of the School of Medicine.
 HENRY D. HARLAN, LL.D., Dean of the School of Law.
 ROBERT H. FREEMAN, A.M., LL.B., Assistant Dean of the School of Law.
 E. FRANK KELLY, Ph.D., Advisory Dean of the School of Pharmacy.
 ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.
 T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.
 J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.
 W. S. SMALL, Ph.D., Dean of the College of Education.
 M. MARIE MOUNT, M.A., Dean of the College of Home Economics.
 C. O. APPLEMAN, Ph.D., Dean of the Graduate School.
 ADELE H. STAMP, M.A., Dean of Women.
 R. S. LYTLE, Major Inf., Head of the Department of Military Science and Tactics.
 W. B. KEMP, Ph.D., Professor of Genetics and Agronomy.

OFFICERS OF INSTRUCTION

For the Year 1928-1929

At College Park

PROFESSORS

C. O. APPLEMAN, Ph.D., Professor of Plant Physiology and Bio-Chemistry, Dean of the Graduate School.
 E. C. AUCHTER, Ph.D., Professor of Horticulture.
 GRACE BARNES, B.S., B.L.S., Librarian.
 F. W. BESLEY, Ph.D., Professor of Farm Forestry, State Forester.
 L. B. BROUGHTON, Ph.D., Professor of Agricultural Chemistry, Acting Head of the Department of Chemistry, Chairman of the Pre-Medical Committee.
 O. C. BRUCE, M.S., Professor of Soil Technology.
 R. W. CARPENTER, A.B., LL.B., Professor of Agricultural Engineering and Lecturer in Law.
 E. N. CORY, Ph.D., Professor of Entomology, State Entomologist.
 H. F. COTTERMAN, B.S., M.A., Professor of Agricultural Education and Rural Sociology.
 MYRON CREESE, B.S., E.E., Professor of Electrical Engineering.
 HAYES BAKER-CROTHERS, Ph.D., Professor of History and Political Science.
 S. H. DEVAULT, A.M., Professor of Agricultural Economics.
 NATHAN L. DRAKE, Ph.D., Professor of Organic Chemistry.
 C. G. EICHLIN, A.B., M.S., Professor of Physics.
 F. W. GEISE, M.S., Professor of Olericulture.
 HARRY GWINNER, M.E., Professor of Engineering Mathematics.
 H. C. HOUSE, Ph.D., Professor of English and English Literature.
 A. N. JOHNSON, B.S., D.Eng., Professor of Highway Engineering, Director of Engineering Research, Dean of the College of Engineering.
 W. B. KEMP, Ph.D., Professor of Genetics and Agronomy.
 B. T. LELAND, B.S., M.A., Professor of Industrial Education.
 FRIEDA M. MCFARLAND, M.A., Professor of Textiles and Clothing.
 EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education.
 DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.
 J. E. METZGER, B.S., M.A., Professor of Agronomy.
 M. MARIE MOUNT, M.A., Professor of Home and Institutional Management, Dean of the College of Home Economics.
 J. N. G. NESBIT, B.S., M.E., E.E., Professor of Mechanical Engineering.

J. B. S. NORTON, M.S., D.Sc., Professor of Systematic Botany and Mycology.

H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station, Dean of the College of Agriculture.

E. M. PICKENS, D.V.M., A.M., Professor of Bacteriology, Animal Pathologist of the Biological Laboratory and Live Stock Sanitary Service.

C. J. PIERSON, A.M., Professor of Zoology.

R. C. REED, Ph.B., D.V.M., Professor of Animal Pathology.

C. S. RICHARDSON, A.M., Professor of Public Speaking and Extension Education.

MANDEL SHERMAN, Ph.D., M.D., Collaborating Professor of Child Psychology.

W. S. SMALL, Ph.D., Professor of Education, Dean of the College of Education, Director of the Summer School.

THOS. H. SPENCE, A.M., Professor of Classical Languages and Literature, Dean Emeritus of the College of Arts and Sciences.

ADELE H. STAMP, M.A., Dean of Women.

S. S. STEINBERG, C.E., Professor of Civil Engineering.

T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics, Dean of the College of Arts and Sciences.

W. T. L. TALIAFERRO, A.B., D.Sc., Professor of Farm Management.

C. E. TEMPLE, M.A., Professor of Plant Pathology, State Plant Pathologist.

A. S. THURSTON, M.S., Professor of Floriculture and Landscape Gardening.

R. V. TRUITT, M.S., Professor of Aquiculture.

R. H. WAITE, B.S., Professor of Poultry Husbandry.

A. E. ZUCKER, Ph.D., Professor of Modern Languages and Comparative Literature.

ASSOCIATE PROFESSORS

G. F. CADISCH, Ph.D., Associate Professor of Banking and Investments, Acting Head of Department of Economics and Sociology.

CHARLES B. HALE, Ph.D., Associate Professor of English.

SUSAN EMOLYN HARMAN, Ph.D., Associate Professor of English.

MALCOLM HARING, Ph.D., Associate Professor of Chemistry.

E. S. JOHNSTON, Ph.D., Associate Professor of Plant Physiology.

C. F. KRAMER, A.M., Associate Professor of Modern Languages.

G. J. SCHULZ, A.B., Lecturer in Political Science.

J. W. SPROWLS, Ph.D., Associate Professor of Educational Psychology.

CLARIBEL P. WELSH, B.S., M.A., Associate Professor of Foods.

R. C. WILEY, Ph.D., Associate Professor of Analytical Chemistry.

ASSISTANT PROFESSORS

B. H. BENNETT, M.A., Assistant Professor of Agricultural Economics.

EDWARD H. BOWES, 1st Lieut. Inf., Assistant Professor of Military Science and Tactics.

C. M. CONRAD, Ph.D., Assistant Professor of Plant Physiology and Biochemistry.

TOBIAS DANTZIG, Ph.D., Assistant Professor of Mathematics.

HARRY A. DEFERRARI, Ph.D., Assistant Professor of Modern Languages.

BERNARD T. DODDER, M.S., Assistant Professor of Accountancy and Business Administration.

G. EPPLEY, M.S., Assistant Professor of Agronomy.

W. G. FRIEDRICH, M.A., Assistant Professor of Modern Languages (Baltimore).

S. S. HANDY, A.B., Assistant Professor of English (Baltimore).

L. J. HODGINS, B.S., Assistant Professor of Electrical Engineering.

H. B. HOSHALL, B.S., Assistant Professor of Mechanical Engineering.

W. E. HUNT, M.S., Assistant Professor of Animal Husbandry.

L. W. INGHAM, M.S., Assistant Professor of Dairy Production.

PAUL KNIGHT, M.S., Assistant Professor of Entomology.

F. M. LEMON, A.M., Assistant Professor of English.

EDGAR F. LONG, M.A., Assistant Professor of Education.

PEARL McCONNELL, M.A., Assistant Professor of Zoology.

R. C. MUNKWITZ, M.S., Assistant Professor of Market Milk.

ELEANOR L. MURPHY, B.S., Assistant Professor of Home Management.

L. J. POELMA, D.V.M., M.S., Assistant Professor of Bacteriology.

GEO. D. QUIGLEY, B.S., Assistant Professor of Poultry Husbandry.

A. W. RICHESON, Ph.D., Assistant Professor of Mathematics (Baltimore).

J. H. SCHAD, M.A., Assistant Professor of Mathematics (Baltimore).

WM. P. SCOBAY, Capt. Inf., Assistant Professor of Military Science and Tactics.

R. H. SKELTON, Ph.B., C.E., Assistant Professor of Civil Engineering.

J. T. SPANN, B.S., Assistant Professor of Mathematics.

E. B. STARKEY, Ph.D., Assistant Professor of Chemistry (Baltimore).

P. P. THOMAS, Ph.D., Assistant Professor of Soil Technology.

R. S. VANDEN BOSCHE, M.S., Assistant Professor of Inorganic Chemistry (Baltimore).

M. F. WELSH, D.V.M., M.S., Assistant Professor of Bacteriology.

CHARLES E. WHITE, Ph.D., Assistant Professor of Chemistry.

W. E. WHITEHOUSE, Ph.D., Assistant Professor of Pomology.

R. W. YOUNG, A.B., 1st Lieut. Inf., Assistant Professor of Military Science and Tactics.

INSTRUCTORS

GEO. F. ALRICH, M.S., E.E., Instructor in Mathematics.

E. S. BELLMAN, A.B., Instructor in Sociology.

GERTRUDE BERGMAN, A.B., Instructor in Library Science; Cataloguer.

J. B. BLANDFORD, Instructor in Horticulture, Horticultural Superintendent.

HENRY BRECHBILL, M.A., Instructor in Education.

SUMNER BURHOE, M.S., Instructor in Zoology.

O. C. CLARK, B.S., Instructor in Physics.
 EUGENE B. DANIELS, M.A., M.F.S., Instructor in Economics and Sociology.
 GARDNER H. FOLEY, M.A., Instructor in English (Baltimore).
 GEORGE W. FOGG, M.A., Instructor in Library Science; Library Assistant.
 B. L. GOODYEAR, Instructor in Music.
 EARL HENDRICKS, Staff Sergeant, Instructor in Military Science and Tactics.
 L. C. HUTSON, Instructor in Mining Extension.
 WALTER H. JAEGER, Ph.D., Instructor in History and Political Science.
 WM. H. McMANUS, Warrant Officer, Instructor in Military Science and Tactics.
 M. A. PYLE, B.S., Instructor in Civil Engineering.
 J. THOMAS PYLES, M.A., Instructor in English.
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 H. H. ROSEBERRY, B.S., Instructor in Physics (Baltimore).
 H. B. SHIPLEY, Instructor in Physical Education.
 C. L. SMITH, M.S., Instructor in Plant Physiology.
 KATHLEEN M. SMITH, A.B., Instructor in Education.
 J. M. SNYDER, B.S., Instructor in Soil Technology.
 GUY P. THOMPSON, B.S., Instructor in Zoology (Baltimore).
 R. M. WATKINS, M.A., Instructor in Public Speaking.

ASSISTANTS

JESSIE BLAISDELL, Assistant in Music.
 NELLIE BUCKEY, B.S., Assistant in Home Economics Education.
 GILES B. COOKE, M.S., Assistant in Chemistry.
 J. E. FABER, JR., M.S., Assistant in Bacteriology.
 W. J. HART, M.S., Assistant in Agricultural Economics.
 DONALD HENNICK, Assistant in Mechanical Engineering.
 AUDREY KILLIAM, B.S., Assistant in Home Economics.
 H. H. KAVELER, M.S., Assistant in Chemistry.
 E. R. NICHOLAS, A.B., Assistant in English (Baltimore).
 A. C. PARSONS, A.M., Assistant in Modern Languages.
 BERNICE F. PIERSON, B.S., Assistant in Zoology (Baltimore).
 J. H. ROSEBERRY (MRS.), Assistant in Physics (Baltimore).
 R. P. STRAKA, M.S., Assistant in Bacteriology.
 KATE WHITE, Assistant in Library.
 LELAND G. WORTHINGTON, B.S., Assistant in Agricultural Education.
 R. C. YATES, M.A., Assistant in Mathematics (Baltimore).

1928-1929 GRADUATE ASSISTANTS

E. A. BEAVENS.....	Bacteriology
J. M. BLANDFORD.....	Home Economics
F. Y. BRACKBILL.....	Chemistry
H. B. CORDNER.....	Horticulture
E. S. DEGMAN.....	Horticulture
L. P. DITMAN.....	Entomology
F. H. EVANS.....	Chemistry
L. A. FLETCHER.....	Horticulture
H. W. GILBERT.....	Chemistry
C. GRAHAM.....	Entomology
W. T. HENEREY.....	Entomology
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A. F. MASON.....	Horticulture
W. A. MATTHEWS.....	Horticulture
E. E. MILLER.....	Modern Languages
A. J. MOYER.....	Plant Pathology
R. W. RIEMENSCHNEIDER.....	Chemistry
A. E. ROSASCO.....	Modern Languages
E. H. SCHMIDT.....	Agronomy
T. B. SMITH.....	Chemistry
W. M. STUART.....	Agronomy
W. C. SUPPLEE.....	Chemistry
G. S. WEILAND.....	Agronomy
J. H. WEINBERGER.....	Horticulture
B. B. WESTFALL.....	Chemistry
S. H. WINTERBERG.....	Agronomy
L. D. ZERN.....	Dairy Husbandry

FELLOWS

W. W. ALDRICH.....	Horticulture
M. H. BERRY.....	Dairy Husbandry
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R. L. HERD.....	Chemistry
H. J. NEWELL.....	Plant Physiology
E. R. NICHOLAS.....	English
G. T. O'NEILL.....	Economics
P. A. RAPER.....	Bacteriology
F. T. SIMONDS.....	Plant Pathology
J. R. SPIES.....	Chemistry
M. S. YORK.....	Home Economics

LIBRARY STAFF

GRACE BARNES, B.S., B.L.S.	Librarian
GERTRUDE BERGMAN, A.B.	Cataloguer
GEORGE W. FOGG, M.A.	Assistant
KATE WHITE	Assistant

INSPECTION AND REGULATORY SERVICE

(Feeds, Fertilizer, and Lime)

L. B. BROUGHTON, Ph.D.	Acting State Chemist
L. E. BOPST, B.S.	Assistant State Chemist
E. C. DONALDSON, M.S.	Chief Inspector
W. M. J. FOOTEN	Inspector
E. M. ZENTZ	Inspector
H. R. WALLS	Assistant Chemist and Micro-analyst
L. H. VAN WORMER	Assistant Chemist
EDWIN L. FORD	Assistant Chemist

FACULTY COMMITTEES

At College Park

ALUMNI

Messrs. Broughton, Hoshall, Faber, Hillegeist, Cory, Eppley, and Truitt.

BUILDINGS

Messrs. Crisp, Johnson, Meade, Pierson, Bruce, and Eichlin.

CATALOGUE, STUDENT ENROLLMENT, AND ENTRANCE

Messrs. Small, Johnson, T. H. Taliaferro, Patterson, Appleman, Kemp, House, and Misses Mount, Stamp, and Preinkert.

CLASS ASSIGNMENT

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 L. A. M. KRAUSE, M.D., Associate in Medicine.
 MILFORD LEVY, M.D., Associate in Neurology.
 W. S. LOVE, M.D., Associate in Medicine.
 CLARENCE E. MACK, M.D., Associate in Pediatrics.
 W. I. MESSICK, M.D., Associate in Clinical Medicine.
 CLEMENT MONROE, M.D., Associate in Orthopedic Surgery.
 SAMUEL W. MOORE, D.D.S., Associate in Anæsthesia.
 EMIL NOVAK, M.D., Associate in Obstetrics.
 M. A. NOVEY, M.D., Associate in Obstetrics.
 FRANK N. OGDEN, M.D., Associate in Biological Chemistry.
 D. J. PESSAGNO, M.D., Associate in Surgery.
 J. G. M. REESE, M.D., Associate in Obstetrics.
 C. S. REIFSCHNEIDER, M.D., Associate in Surgery.
 EMIL G. SCHMIDT, Ph.D., Associate in Biological Chemistry.
 E. P. SMITH, M.D., Associate in Obstetrics and Gynecology.
 GEORGE A. STRAUSS, JR., M.D., Associate in Gynecology.
 A. A. SUSSMAN, M.D., Associate in Medicine.
 R. G. WILLSE, M.D., Associate in Gynecology.
 C. LEE WILMOTH, A.B., M.D., Associate in Orthopedic Surgery.
 S. B. WOLFE, M.D., Associate in Physiology.
 A. H. WOOD, M.D., Associate in Genito-Urinary Surgery.

INSTRUCTORS

WILLIAM V. ADAIR, D.D.S., Clinical Operative Dentistry.
 ELIZABETH AITKENHEAD, R.N., Surgical Technique for Nurses and Supervisor of Operating Pavilion.
 JOHN CONRAD BAUER, Ph.G., B.S., Chemistry.
 JOSE BERNARDINI, D.D.S., Clinical Operative Dentistry.

H. F. BONGARDT, M.D., Surgery.
 WILLIS W. BOATMAN, D.D.S., Prosthetic Technics.
 DUDLEY P. BOWE, M.D., Obstetrics.
 KENNETH BOYD, M.D., Practical Anatomy.
 LLOYD O. BRIGHTFIELD, D.D.S., Clinical Operative Dentistry.
 BALTHIS A. BROWNING, D.D.S., Clinical Operative Dentistry.
 HENRY F. BUETTNER, M.D., Bacteriology.
 MORRIS E. COBERTH, D.D.S., Clinical Operative Dentistry.
 MIRIAM CONNELLY, Dietetics.
 CHARLES COWARD, D.D.S., Crown and Bridge Technics.
 F. N. CRIDER, D.D.S., Operative Technics and Dental Anatomy.
 FREDERICK B. DART, M.D., Pediatrics.
 N. J. DAVIDOV, M.D., Gastro-Enterology.
 P. A. DEEMS, D.D.S., Clinical Operative Dentistry.
 G. A. DEVLIN, D.D.S., Orthodontia Technics.
 BRICE DORSEY, D.D.S., Clinical Exodontia and Radiodontia.
 MONTE EDWARDS, M.D., Surgery and Proctology.
 ALBERT EISENBERG, M.D., Gastro-Enterology.
 V. L. ELLICOTT, M.D., Hygiene and Public Health.
 L. LYNN EMMART, D.D.S., Clinical Operative Dentistry.
 J. J. ERWIN, M.D., Obstetrics.
 L. K. FARGO, M.D., Genito-Urinary Diseases.
 I. J. FEINGLOSS, M.D., Pediatrics.
 B. J. FERRY, M.D., Pediatrics.
 A. H. FINKELSTEIN, M.D., Pediatrics.
 GARDNER H. FOLEY, A.M., English.
 JOSEPH D. FUSCO, D.D.S., Clinical Exodontia and Radiodontia.
 JOSEPH E. GATELY, M.D., Dermatology.
 MOSES GELLMAN, M.D., Orthopedic Surgery.
 WILLIAM F. GEYER, M.D., Pediatrics.
 M. G. GICHNER, M.D., Medicine.
 SAMUEL GLICK, M.D., Pediatrics and Assistant in Pathology.
 HARRY GOLDSMITH, M.D., Psychiatry.
 SAMUEL GOLDSTEIN, Ph.G., Ph.C., Pharmacy.
 M. H. GOODMAN, M.D., Pathology.
 KARL F. GREMPER, D.D.S., Operative Technics.
 HUBERT GURLEY, M.D., Practical Anatomy.
 E. E. HACHMAN, D.D.S., Practical Anatomy.
 E. W. HANRAHAN, M.D., Surgery.
 R. H. HENING, M.D., Pediatrics.
 ROBERT HODES, M.D., Pediatrics.
 C. F. HORINE, M.D., Surgery.
 CLEWELL HOWELL, M.D., Pediatrics.
 FRANK HURST, D.D.S., Clinical Operative Dentistry.
 ORVILLE C. HURST, D.D.S., Prosthetic Technics.
 ARNOLD LAWSON JENSEN, B.Sc., M.D., Orthopedic Surgery.

W. R. JOHNSON, M.D., Anatomy and Surgery.
 LOUIS E. KAYNE, D.D.S., Physiological Chemistry.
 F. X. KEARNEY, M.D., Surgery.
 M. KOPPLEMAN, M.D., Gastro-Enterology.
 GEORGE S. KOSHI, D.D.S., Crown and Bridge.
 MARIE KOVNER, M.D., Pediatrics.
 ISADORE I. LEVY, M.D., Gastro-Enterology.
 JOHN F. LUTZ, M.D., Histology.
 R. F. MCKENZIE, M.D., Diseases of Nose and Throat.
 WILLIAM MICHEL, M.D., Medicine.
 C. PAUL MILLER, D.D.S., Clinical Prosthetics.
 ZACHARIAH MORGAN, M.D., Gastro-Enterology.
 M. B. MOTT, D.D.S., Clinical Operative Dentistry.
 J. G. MURRAY, JR., M.D., Obstetrics.
 EDWARD NOVAK, M.D., Medicine.
 WALTER L. OGGESEN, D.D.S., Crown and Bridge Technics.
 F. S. OREM, M.D., Pediatrics.
 GRACE PEARSON, R.N., Social Service.
 J. A. F. PFEIFFER, M.D., Bacteriology.
 GEORGE J. PHILLIPS, D.D.S., Prosthetic Technics.
 SAMUEL P. PLATT, Mechanical Drawing.
 VICTOR S. PRIMROSE, D.D.S., Clinical Prosthetic Dentistry.
 JAMES E. PYOTT, D.D.S., Clinical Prosthetic Dentistry.
 M. N. PUTTERMAN, M.D., Pediatrics.
 W. G. QUEEN, M.D., Anaesthesia.
 I. O. RIDGLEY, M.D., Surgery.
 H. HEWELL ROSEBERRY, B.S., Physics.
 NATHAN SCHEER, D.D.S., Clinical Operative Dentistry.
 ELIZABETH SHERMAN, M.D., Pediatrics.
 VERNON SHERRARD, D.D.S., Crown and Bridge Technics.
 ISADORE A. SIEGEL, A.B., M.D., Obstetrics.
 JOSEPH SINDLER, M.D., Gastro-Enterology.
 FRANK A. SLAMA, Ph.G., Ph.C., B.S., Botany and Materia Medica.
 WILLIAM A. STRAUSS, M.D., Medicine.
 GUY P. THOMPSON, A.B., Zoology.
 WILLIAM J. TODD, M.D., Pediatrics.
 M. G. TULL, M.D., Hygiene and Public Health.
 HELEN WRIGHT, R.N., Nursing.
 ISABEL M. ZIMMERMAN, R.N., Nursing.
 I. S. ZINBERG, M.D., Gastro-Enterology.

ASSISTANTS

BENJAMIN ABESHOUSE, M.D., Pathology.
 T. B. AYCOCK, M.D., Surgery.
 F. Y. BRACKBILL, B.S., Chemistry.

LEO BROWN, M.D., Surgery.
 A. B. BUCHNESS, M.D., Surgery.
 T. NELSON CAREY, M.D., Medicine.
 RUTH CARR, Biological Chemistry.
 J. J. COLLISON, M.D., Genito-Urinary Diseases.
 S. DEMARCO, M.D., Surgery.
 WILLIAM EMRICH, M.D., Genito-Urinary Diseases.
 S. C. FELDMAN, M.D., Pediatrics.
 B. J. FERRY, M.D., Pediatrics.
 EUGENE L. FLIPPIN, M.D., Roentgenology.
 W. R. GERAGHTY, M.D., Surgery.
 J. WILLIS GUYTON, M.D., Genito-Urinary Surgery.
 W. D. HAWKINS, M.D., Pathology.
 BERTHA HOFFMAN, R.N., Nursing and Supervisor of Wards.
 Z. V. HOOPER, M.D., Gastro-Enterology.
 J. HULLA, M.D., Histology.
 ROBERT W. JOHNSON, M.D., Anatomy and Surgery.
 H. C. KNAPP, M.D., Genito-Urinary Diseases.
 MILTON C. LANG, M.D., Genito-Urinary Diseases.
 L. T. LAVY, M.D., Medicine.
 K. B. LEGGE, M.D., Genito-Urinary Surgery.
 H. B. McELWAIN, M.D., Surgery.
 CLYDE N. MARVEL, M.D., Surgery.
 L. J. MILLAN, M.D., Genito-Urinary Diseases.
 BENJAMIN MILLER, M.D., Pediatrics.
 JOSEPH MILLETT, Ph.G., Zoology.
 DWIGHT MOHR, M.D., Surgery.
 A. C. MONNINGER, M.D., Dermatology.
 RUTH MUSSER, A.B., Pharmacology.
 JAMES W. NELSON, M.D., Histology.
 E. R. NICHOLAS, A.B., English.
 JOHN A. O'CONNOR, M.D., Surgery.
 J. G. ONNEN, M.D., Surgery.
 A. C. PARSONS, A.M., Modern Languages.
 BERNICE F. PIERSON, B.S., Zoology.
 JOSEPH POKORNY, M.D., Anatomy.
 J. H. ROSEBERRY (MRS.), Physics.
 MAY R. SAULSBURY, Night Supervisor.
 MAURICE SHAMER, M.D., Obstetrics.
 F. A. SIGRIST, M.D., Surgery.
 R. HOOPER SMITH, M.D., Medicine.
 KARL J. STEINMULLER, A.B., M.D., Surgery.
 E. V. TEAGARDEN, M.D., Pediatrics.
 HENRY WASSERMAN, M.D., Dermatology.
 W. H. WOODY, M.D., Medicine.
 ROBERT C. YATES, A.M., Mathematics.

FACULTY COMMITTEES

At Baltimore

LIBRARY

(Medicine) Doctors Lynn, Friedenwald, Cohen, and Wylie; (Dentistry)
 Doctors Gaver, Aisenberg, and McDonald; (Pharmacy) Mr. Plitt and
 Miss Cole; (Law) Messrs. Sappington and Freeman, and Mrs. Briscoe.

The Faculty Councils of the Baltimore Schools are included in the
 descriptive statements of the respective schools in Section II.

The Faculty Committees of the Baltimore schools are given in the
 separate announcements issued by the several schools.

SECTION I

General Information HISTORICAL STATEMENT

The history of the present University of Maryland, until they were merged in 1920, is the history of two institutions. These were the old University of Maryland in Baltimore and the Maryland State College (formerly Maryland Agricultural College) in College Park.

The beginning of this history was in 1807, when a charter was granted to the College of Medicine of Maryland. The first class was graduated in 1810. A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law, and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish a "faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added a college of dentistry, a school of pharmacy, and a school of nursing. No significant change in the organization of the University occurred until 1920, more than one hundred years after the original establishment in 1812.

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed Western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Mary-

land Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the name of the latter was changed to the University of Maryland.

All the property formerly held by the old University of Maryland was turned over to the Board of Trustees of the Maryland State College, and the name was changed to the Board of Regents of the University of Maryland. Under this charter every power is granted necessary to carry on an institution of higher learning and research. It provides that the University shall receive and administer all existing grants from the Federal Government for education and research and all future grants which may come to the State from this source. The University is co-educational in all its branches.

ADMINISTRATIVE ORGANIZATION

The government of the University is vested by law in a Board of Regents, consisting of nine members appointed by the Governor each for a term of nine years. The administration of the University is vested in the President. The University Senate and the Administrative Council act in an advisory capacity to the President. The composition of these bodies is given elsewhere.

The University organization comprises the following administrative divisions:

- College of Agriculture.
- Agricultural Experiment Station.
- Extension Service.
- College of Arts and Sciences.
- College of Education.
- College of Engineering.
- College of Home Economics.
- Graduate School.
- Summer School.
- Department of Military Science and Tactics.
- Department of Physical Education and Recreation.
- School of Dentistry.
- School of Law.
- School of Medicine.
- School of Nursing.
- School of Pharmacy.

The University faculty consists of the President, Deans, the instructional staffs of all the divisions of the University, and the Librarians. The faculty of each college or school constitutes a group which passes on all questions that have exclusive relationship to the division represented. The President is ex-officio a member of all of the faculties.

The organization and activities of the several administrative divisions are described in full in the appropriate chapters of Section II.

THE EASTERN BRANCH

The Eastern Branch of the University of Maryland is located at Princess Anne, Somerset County. It is maintained for the education of negroes in agriculture and the mechanic arts.

LOCATION

The University of Maryland is located at College Park, in Prince George's County, Maryland, on the Baltimore and Ohio Railroad, eight miles from Washington and thirty-two miles from Baltimore. At least eight trains a day from each city stop at College Park, which makes the place easily accessible from all parts of the State.

The campus fronts on the Baltimore and Washington Boulevard. The suburban town of Hyattsville is two miles to the south, and Laurel is ten miles to the north on the same road. Access to these towns and to Washington may be had by steam and electric railways and busses.

The Professional Schools of Medicine, Nursing, Pharmacy, Dentistry, and Law are located in Baltimore at the corner of Lombard and Greene Streets.

EQUIPMENT

The University equipment of grounds and buildings in College Park and Baltimore is as follows:

College Park

Grounds. The University grounds at College Park comprise about 300 acres. The site is healthful and attractive. The terrain is varied. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area of surrounding country and ensures excellent drainage. Many of the original forest trees remain. Most of the buildings are located on this eminence. The adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields. The buildings of the Agricultural Experiment Station face the boulevard. The farm of the

College of Agriculture contains about 240 acres, and is devoted to fields, gardens, orchards, vineyards, poultry yards, etc., which are used for experimental purposes and demonstration work in agriculture and horticulture.

Plans for the location of future buildings have been worked out with due regard to engineering problems and landscape effects.

The sanitary conditions are excellent, as shown by the absence for many years of epidemics in the student body.

The water supply and sewage disposal are provided by the Washington and Suburban Sanitary Commission.

Buildings. The equipment of buildings comprises about twenty individual structures which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: The Agriculture Building, which accommodates the Executive Offices, the College of Agriculture, the College of Education, the Agricultural and Home Economics Extension Service, and the Auditorium; Morrill Hall, which accommodates in part the College of Arts and Sciences; the Engineering Building; the Home Economics Building; the Chemistry Building for instruction in Chemistry and for State work in analysis of feeds, fertilizers, and agricultural lime; Dairy Building; Horticulture Building; Stock Judging Pavilion; Poultry Buildings.

Experiment Station. This group consists of the main building, a large brick structure of the colonial period, housing the office of the Director, and laboratories for research in chemistry and plant physiology; other smaller buildings for housing the laboratories for research in soils and for seed testing; an agronomy building; a secondary horticulture building; and barns, farm machinery building, silos, and other structures required in agricultural research.

Physical Education. This group consists of the Ritchie Gymnasium, which provides quarters for the Military Department as well as for physical education; and the Byrd Stadium, with a seating capacity of 7,000 and furnished with dressing rooms for contestants, rest rooms for patrons, and equipment for receiving and transmitting information concerning contests in progress.

Dormitories. Two dormitories, Calvert Hall and Silvester Hall, provide accommodations for 462 men students. Accommodations for 52 women students are provided by three buildings—Gerneaux Hall, the Practice House, and a temporary structure. The Practice House serves also as a demonstration home for the College of Home Economics.

Service Structures. This group includes the Central Heating and Power Plant; the Infirmary with accommodations for twenty patients, physician's office, operating room and nursing quarters; Dining Hall; laundry.

Baltimore

The group of buildings located at the corner of Lombard and Greene Streets provides the available housing for the Baltimore division of the University. There are no grounds other than the sites of these buildings. The group comprises the original Medical School building erected in 1814, the University Hospital, and the Law School building. Full description of these parts of the University equipment are found in the chapters devoted to the Baltimore Schools in Section II.

A new Laboratory Building for the Schools of Dentistry and Pharmacy is now under construction. When completed, the building will provide enlarged facilities for these two Schools.

Libraries

Libraries are maintained at both the College Park and the Baltimore branches of the University.

The Library at College Park is housed in a separate two-story building. The first floor is devoted to collected material relating to agriculture. The special catalogue cards issued by the United States Department of Agriculture make accessible the large number of State and national bulletins on agriculture and related scientific subjects. The general reference books and the reading room occupy the second floor. The Library is open from 8.15 A. M. to 5.30 P. M. Monday to Friday, inclusive; Saturday from 8.15 A. M. to 12.30 P. M.; Sunday afternoon from 2.30 P. M. to 5.30 P. M., and all evenings except Saturday from 6.30 P. M. to 10 P. M.

New Library Building

By action of the Governor of the State and the Legislature, provision has been made for a new library building, which is now under construction.

The Library facilities in Baltimore for the Schools of Medicine, Law, and Pharmacy are consolidated and housed in Davidge Hall; those for the School of Dentistry and the courses in Arts and Sciences are temporarily located in the building at 6 and 8 Greene Street. The Library hours during the University years are from 9 A. M. to 10 P. M. daily, except Saturday, when the Library closes at 6 P. M.

The Libraries, including departmental libraries, contain a total of 52,000 bound volumes and large collections of unbound journals. In the two central libraries there are approximately 12,000 United States Government documents, unbound reports, and pamphlets.

Through the Inter-library Loan Systems of the Library of Congress, the United States Department of Agriculture and other Government Libraries in Washington, the University Library is able to supplement its reference

material, either by arranging for personal work in these Libraries or by borrowing the books from them.

INCOME

The University is supported by funds appropriated for its use by the State and Federal Governments, fees from students, and funds from other sources. The appropriations from the Federal Government are derived from the original Land Grant Act, the second Morrill Act, the Nelson Act, the Smith-Hughes Act, the Smith-Lever Act, the Hatch Act, the Adams Act, the Purnell Act, and the Capper-Ketcham Act.

ENTRANCE

All communications regarding entrance should be addressed to the Registrar, who administers the entrance requirements for all departments of the University. Communications pertaining to entrance to the College Park Colleges should be addressed to the Registrar, University of Maryland, College Park, Maryland; those pertaining to the Baltimore Schools, to the Registrar, University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.

GENERAL INFORMATION

Age of Applicants. No applicant who is less than sixteen years of age will be admitted to any of the Colleges or Schools of the University.

Entrance Preliminaries. Candidates for admission should apply as early as possible to the Registrar for the necessary forms for the transfer of preparatory credits. These forms after they are made out and signed by the high school principal should be returned to the Registrar. It is advisable for prospective students to attend to this preliminary as early as possible after graduation from high school, in order to make sure that the units offered are sufficient and acceptable. A candidate who fails to attend to this preliminary may find after reaching the University that he cannot enter. The Registrar is always glad to advise with students, either by correspondence or in person, concerning their preparation. The Registrar sends out a general statement of the procedure for new students to follow after they are duly admitted to the University.

Time of Admission. Applicants for admission should plan to enter at the beginning of the school year in September. It is possible to be admitted to certain Colleges at the beginning of either semester, but students can seldom enter the University to advantage except at the opening of the school year.

Registration. Registration for the first semester, except for new students, takes place at the end of the second semester of the preceding year. Students register for the second semester during the week preceding final examinations of the first semester.

Late Registration. Students who do not complete their registration and classification on regular registration days will be required to pay \$3.00 extra on the day following the last registration day and \$2.00 for each additional day thereafter until their registration is completed. The maximum fine is \$9.00. Students who fail to file course cards in the specified periods in May and January are considered late registrants.

After seven days from the opening of a semester, fees are imposed for a change of registration.

Students who, for any reason, are more than seven days late in registering must secure permission from the instructors in charge for admission to courses. Such permission must be given in writing to the student's dean before course cards will be issued.

Freshman Registration. Registration of freshmen for the first semester will take place Tuesday, September 17th. All freshmen are expected to register on this date.

Dormitories will be ready for occupancy by freshmen Monday, September 16th.

A special freshman program is planned covering the time between registration day (September 17th) and the beginning of the instruction schedule (Friday, September 20th), the object of which is to complete the organization of freshmen so that they may begin the regular work promptly and effectively, and to familiarize them with their new surroundings.

On or about September 1st the Registrar will send all prospective freshmen a detailed statement of this program.

Required to Take Military Instruction

All male students, if citizens of the United States, whose bodily condition indicates that they are physically fit to perform military duty or will be upon arrival at military age, whether pursuing a four-year or a two-year course of study, are required to take for a period of two years, as a prerequisite to graduation, the military training offered by the War Department.

REQUIREMENTS FOR ADMISSION

In general, the requirements for admission to the freshman class are the same as those prescribed for graduation by the approved high schools of Maryland.

High or preparatory school work is evaluated on the basis of "units." A unit represents a year's study in any subject in a secondary school, and constitutes approximately one-fourth of a full year's work. It pre-supposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Two laboratory

periods in any science or vocational study are considered as equivalent to one class exercise.

Normally, not more than three units are allowed for four years of English. If, however, a fifth course in English has been taken, an extra unit will be allowed.

Fifteen units, the equivalent of a four-year high school curriculum, are required for admission to all the undergraduate colleges. The additional and special requirements for admission to the professional schools and the Graduate School are given in detail in the chapters devoted to those schools.

Prescribed Units. The following units are required of all candidates for admission:

English.....	3
Algebra to Quadratics.....	1
Plane Geometry.....	1
Science.....	1
History.....	—

Total Prescribed..... 7

In addition to these seven prescribed units, the following are required:

(a) For the Pre-Medical curriculum: two years of foreign language.

(b) For the Engineering and Industrial Chemistry curricula, it is necessary that the student shall have in addition to one unit in algebra and one unit in plane geometry, one unit in algebra, completed, and one-half unit in solid geometry.

Students who do not offer entrance units in algebra, completed, and in solid geometry, may enter the Engineering College, but will be obliged, during the first semester, to take courses which will make up the unit in algebra, completed, and one-half unit in solid geometry, and then they may enter upon the regular freshman mathematics at the beginning of the second semester. The work of the second semester freshman mathematics will be offered these students in the summer school.

Elective Units. In addition to the prescribed units, a sufficient number of units to make a total of fifteen must be offered from the following elective subjects:

Agriculture
Astronomy
Biology
Botany
Chemistry
Civics
Commercial Subjects
Drawing
Economics
English
General Science

Geology
History
Home Economics
Industrial Subjects
Language
Mathematics
Music
Physical Geography
Physics
Physiology
Zoology

METHODS OF ADMISSION

Students are admitted to the University by certificate from approved preparatory schools, by transfer from other colleges or universities, or by examination.

Admission by Certificate from Approved Preparatory Schools. A candidate for admission by certificate must be a graduate of an approved secondary school and be recommended by his high school principal. Non-resident applicants must attain the college recommendation grade of their schools.

The following groups of secondary schools are approved:

- (1) *Secondary schools approved by the Maryland State Board of Education.*
- (2) *Secondary schools accredited by the Association of Colleges and Preparatory Schools of the Southern States.*
- (3) *Secondary schools accredited by the North Central Association of Colleges and Secondary Schools.*
- (4) *Secondary schools accredited by the State Universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.*
- (5) *Secondary schools approved by the New England College Entrance Certificate Board.*
- (6) *High schools and academies registered by the Regents of the University of the State of New York.*
- (7) *High and preparatory schools on the accredited list of other State Boards of Education where the requirements for graduation are equivalent to the standard set by the Maryland State Board of Education.*
- (8) *State Normal Schools of Maryland and other State Normal Schools having equal requirements for graduation.*

Regulations Governing Admission from Preparatory Schools in Maryland and the District of Columbia. Graduates of Maryland high schools will be admitted in conformity with provisions of the State School Law and the interpretative regulations of the State Board of Education.

- (1) *State School Law (Sect. 198). All certificates or diplomas issued to students having completed a course of study in a county high school shall show the group to which said high school belongs, the course taken by the students, and the number of years of instruction given. Any State-supported or State-aided institution of higher learning shall accept as a student any graduate of an approved public high*

school who is certified by the high school principal as having the qualifications to pursue a course of study in the particular institution of higher learning, said qualifications being based upon standards determined, for graduates of the county high schools, by the State Board of Education and for the graduates of the Baltimore City high schools, by the Board of School Commissioners of Baltimore City; or who shows, by passing examinations set by the particular State-aided or State-supported institution of higher learning, that he or she has the qualifications to pursue a course of study in that institution.

(2) *Interpretative Regulations of the State Board of Education.*

- (a) *A high school graduate is assured two chances of admission to one of the institutions of higher learning concerned—EITHER BY BEING RECOMMENDED BY HIS HIGH SCHOOL PRINCIPAL or BY PASSING ENTRANCE EXAMINATIONS SET BY THE PARTICULAR INSTITUTION.*
- (b) *The institution of higher learning is AT LIBERTY TO ACCEPT ANY GRADUATE even if he neither qualifies for a recommendation from his high school principal nor passes entrance examinations. Such a graduate, however, is NOT IN A POSITION TO DEMAND ADMISSION.*
- (c) *Maryland high school principals shall certify for entrance to any Maryland State-supported or State-aided institution of higher learning any student who has met the published subject-matter requirements of the particular higher institution, and who has made a grade of A or B in at least 60% of the college entrance courses which have been pursued in the last two years of the high school course, and a grade of C or higher in all other college entrance courses which have been pursued during the last two years of the high school course.*
- (3) *In conformity with the preceding State Law and regulations of the State Board of Education, candidates for admission from Maryland high schools will be classified as "certified" and "non-certified," and high school principals will indicate on the application forms whether the candidate is "certified" or "non-certified." Candidates who are "certified" will be admitted to full regular standing in the freshman class. Candidates who are "non-certified" will be admitted on trial, the period of trial to be eight weeks. Students so admitted, who within that period do satisfactory work, will be placed on full regular standing at the end of that period; those whose work is doubtful will be placed on probation until the end of the first semester; those whose work indicates failure will be advised to withdraw and their parents so notified.*

The same regulations govern the admission of graduates of the District of Columbia high schools.

For admission by certificate the applicant should file, with the Registrar of the University as soon as possible after the close of the school year in June, a certificate of recommendation made out on the blank form furnished by the University.

Admission by Transfer from Other Colleges or Universities. A candidate for admission by transfer from another College or University must present evidence that he has maintained a *satisfactory* and *honorable record* at the institution which he has attended, in addition to having satisfied the entrance requirements of the University of Maryland.

For admission by transfer the applicant should file with the Registrar as soon as possible after the close of the school year in June a Certificate of Recommendation made out on the blank form furnished by the University. In addition he should have furnished the Registrar, by the institution he has attended, a complete official transcript of his record, together with a statement of honorable dismissal.

Advanced Standing. Advanced standing is granted to students transferring from institutions of collegiate rank for work completed which is equivalent in extent and quality to the work of the University of Maryland, subject to the following provisions:

- (1) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree with less than one year of resident work.
- (2) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree until he has satisfied the full requirements of the curriculum he may elect.
- (3) In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded it elsewhere, the University reserves the right to revoke at any time any credit allowed.
- (4) Credit will not be allowed for more than one-fourth of those courses in which the grade is the lowest passing grade of the college attended.

An applicant may request examination for advanced credit in any subject.

Admission by Examination. Candidates who are not eligible for admission by certificate or by transfer will be admitted by presenting evidence of having passed the examinations of either the College Entrance Examination Board or the New York Regents' Examinations covering work sufficient to meet the entrance requirements.

The University does not give entrance examinations, but accepts certificates of the College Entrance Examination Board and the New York Regents' Examinations.

The certificate of the College Entrance Examination Board, showing a grade of 60 per cent. or higher, will be accepted as satisfying the entrance requirements in a subject. These examinations are held at various points once a year, beginning the third Monday in June. Full information regarding these examinations may be obtained from the Secretary of the College Entrance Examination Board, 431 W. 117th Street, New York City.

Credit also will be allowed for examinations conducted by the Regents of the University of the State of New York.

Unclassified Students. Mature students who have had insufficient preparation to pursue any of the four-year curricula may matriculate, with the consent of the Committee on Entrance, for such subjects as they are fitted to take. These students, however, will be ineligible for degrees.

HEALTH SERVICE

PHYSICAL EXAMINATIONS

As soon as possible after the opening of the fall semester, as a measure for protecting the health of the student body, all students who enter the undergraduate colleges at College Park are given a physical examination. The examination of the men students is conducted by the College Physician in co-operation with the Military Department. The examination of the women students is conducted by a woman physician especially employed for this purpose in co-operation with the Instructor of Physical Education for Women.

RULES GOVERNING MEDICAL SERVICE

1. All students, paying the fixed University charges, who report at the Infirmary will be given medical attention and medicine, except for special conditions, such as major operations, eye, ear, and nose work, etc.
2. Students residing on the campus when too sick to report at the Infirmary in person will be visited in their rooms by the University Physician or nurse. Except in emergencies, such cases of illness should be reported at the usual hours at the Infirmary.
3. Students residing in fraternity, sorority, or boarding houses adjacent to and approved by the University will be treated by the University Physician the same as students living on the campus. When practicable, sickness should be reported before 9 A. M. to the University Physician (phone Berwyn 68) or Infirmary (Berwyn 85-M).
4. Students living at home with relatives or guardians shall not be entitled to medical attention in their homes unless injured in some form of University activity.
5. Students residing in fraternity, sorority, or boarding houses may, upon order of the University Physician, be cared for in the Infirmary. Such students shall pay the University an extra charge of \$1.00 per day to cover cost of food and service from the Dining Hall.

6. The University Physician will give medical supervision and treatment to employees of the University (but not their families) who work in the kitchen, dining hall, dormitories, and dairy.

7. Members of the faculty, clerical force, and students not paying fixed charges shall *not* be entitled to *free* treatment or medical attention by the University Physician or nurse, or to have the use of the Infirmary.

REGULATIONS, GRADES, DEGREES

REGULATION OF STUDIES

Course Numbers. Courses for undergraduates are designated by numbers from 1—99; courses for advanced undergraduates and graduates, by numbers, 100—199, and courses for graduates, by numbers, 200—299.

The letter following the number of a course indicates the semester in which it is offered; thus, course 1f is offered in the first semester; 1s, in the second semester. The letter "y" indicates a full-year course. The number of hours' credit for each course is indicated by the arabic numeral in parentheses following the title of the course.

Schedule of Courses. The semester schedules of days, hours, and rooms are issued as a separate pamphlet at the beginning of each semester.

Definition of Credit Unit. The semester hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one semester. Two or three periods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory or in outside preparation for each credit hour in any course.

Number of Hours. The normal student load is from 15 to 19 semester hours, according to curriculum and year. These variations are shown in the appropriate chapters in Section II describing the several divisions of the University. No student may carry either more or less than the prescribed number of hours without specific permission from the Dean of his College.

EXAMINATIONS AND GRADES

Examinations. Examinations are held at the end of each semester in accordance with the official schedule of examinations. No student is exempted from examination in any course.

Grading. The system of grading is uniform in the different departments and divisions of the University.

The following grade symbols are used: A, B, C, D, E, F, and I. The first four, A, B, C, and D, are passing; E, condition; F, failure; I, incomplete.

Grade "A" denotes superior scholarship; grade "B," good scholarship; grade "C", fair scholarship, and grade "D", passing scholarship.

A student who receives the grade "D" in more than one-fourth of the credits required for graduation must take additional courses or repeat courses until he has the required number of credits for a degree, three-fourths of which carry a grade above "D".

A student with a grade of "E" is conditioned in the course. A grade of "E" may be changed by a re-examination to "D" or "F". The grade "E" cannot be raised to a higher grade than "D". A condition not removed within the succeeding semester becomes a failure.

The mark of "I" (Incomplete) is given only to those students who have a proper excuse for not having completed all the requirements of a course. The mark of "I" is not used to signify work of inferior quality. In cases where this grade is given the student must complete the work assigned by the instructor by the end of the first semester in which that subject is again offered, or the mark becomes "F".

Work of grade "D", or of any passing grade, cannot be raised to a higher grade except by repeating the course. A student who repeats a course for which he has received credit for work done at this University or elsewhere, must meet all the requirements of the course, including regular attendance, laboratory work, and examinations. His final grade will be substituted for the grade already recorded, but he will not receive any additional credit for the course.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

ELIMINATION OF DELINQUENT STUDENTS

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health, or to the health of others, or whose conduct is not satisfactory to the authorities of the University. *Students of the last class may be asked to withdraw even though no specific charge be made against them.*

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy.

Students in the two-year and three-year curricula are awarded certificates.

The requirements for graduation vary according to the character of work in the different colleges and schools. For full information regarding the requirements for graduation in the several colleges consult the appropriate chapters in Section II.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last thirty credits of any curriculum leading to a baccalaureate degree must be taken in residence at College Park.

At least three-fourths of the credits required for graduation must be earned with grades of A, B, or C.

Each candidate for a degree must file in the Office of the Registrar before March 1st of the year he expects to graduate, a formal application for a degree.

EXPENSES

MAKE ALL CHECKS PAYABLE TO THE UNIVERSITY OF MARYLAND FOR THE EXACT AMOUNT OF THE SEMESTER CHARGES.

In order to reduce the cost of operation, all fees are due and payable as a part of the student's registration, and all persons must come prepared to pay the full amount of the semester charges. No student will be admitted to classes until such payment has been made.

EXPENSES AT COLLEGE PARK

The following table gives the minimum amounts which must be paid per semester by all regular resident students at College Park:

	First	Second	Total
Fixed Charges.....	\$ 57.50	\$ 57.50	\$115.00
Library Fee.....	5.00	5.00
Athletic Fee.....	15.00	15.00
*Depreciation Fee	4.00	4.00
**Special Fee	10.00	10.00
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Minimum Charge to All Students.....	\$ 91.50	\$ 57.50	\$149.00
Board	135.00	135.00	270.00
Lodging	38.00	38.00	76.00
Laundry	13.50	13.50	27.00
	<hr/>	<hr/>	<hr/>
	\$278.00	\$244.00	\$522.00

In addition to the above regular charges the following special fees will be charged as indicated:

\$5.00 matriculation fee to students registering for the first time.
\$62.50 per semester to non-resident students.

* This fee is to cover, in part, depreciation of dormitories, laboratories, classrooms, etc., for which the State does not wholly provide.

**This fee, established by special request of the Student Council for a period of two years, is for the purpose of further improving the University grounds and the physical training facilities.

\$25.00 per semester for resident pre-medical or pre-dental work.
\$125.00 per semester to non-resident students taking pre-medical or pre-dental work.

\$10.00 diploma fee.

\$5.00 certificate fee.

\$20.00 graduation fee for Ph. D. degree, including diploma and hood.

\$1.00 condition examination fee.

\$1.00 fee for change in registration after first week.

\$1.00 fee for failure to file schedule card in Registrar's office within one week after opening of semester.

\$2.00 fee for failure to report for medical examination at time designated.

Students will be charged for wilful damage to property. Where responsibility for the damage can be fixed, the individual student will be billed for it; where it cannot, the entire student body will be charged a flat fee to cover the loss or damage.

Laboratory Fees as follows:

	Per Semester
Bacteriology:	
Fee for each Laboratory course.....	\$2.00
Chemistry:	
Inorganic Chemistry	4.00
Organic Chemistry	6.00
Physical Chemistry	4.00
Analytical Chemistry	6.00
Agricultural Chemistry	5.00
Industrial Chemistry	5.00

Late Registration Fee. Students who do not complete their registration and classification on regular registration days will be required to pay \$3.00 extra on the day following the last registration day, and \$2.00 for each additional day thereafter until their registration is completed. The maximum fee is \$9.00.

Absence Fee. In cases of absence 24 hours before, or 24 hours after classes close or begin, respectively, for a vacation or holiday a student will be penalized by the payment of a special fee of \$3.00 for each class missed.

Graduate Fees. The fees paid by graduate students are as follows:

Matriculation fee.....	\$10.00
Per semester credit hour.....	1.50
Diploma fee (Master's degree).....	10.00
Graduation fee (Doctor's degree).....	20.00

EXPLANATIONS

The Fixed Charges made to all students are a part of the overhead expenses not provided for by the State.

The Board, Lodging, and Laundry charge may vary from semester to semester, but every effort will be made to keep expenses as low as possible.

The Library Fee is designed to cover in part the cost of wear and tear on library books.

The Athletic Fee constitutes a fund which is collected from all students in the University at College Park for the maintenance of athletics, and the entire amount is turned over to the Athletic Director for disbursement. This fund is audited annually by the State Auditors.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents or guardians have been residents of this State or the District of Columbia for at least one year. Students from the District of Columbia have non-resident status if entered in the schools of the University in Baltimore.

Adult students are considered to be resident students, if at the time of their registration, they have been residents of this State for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless his parents or guardians move to and become legal residents of this State.

MISCELLANEOUS INFORMATION

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

Board and lodging may be obtained at boarding houses or in private families, if desired.

Students not rooming in the dormitories may obtain board and laundry at the University at the same rates as those living in the dormitories.

Day students may get lunches at nearby lunch rooms.

The costs of books and supplies and personal needs will vary according to the tastes and habits of the individual student. Books and supplies average about \$40.00 per year.

No diploma will be conferred upon, nor any certificate granted to a student who has not made satisfactory settlement of his account.

DORMITORY RULES AND REGULATIONS

The office of the Dormitory Manager is located in Room 121, Silvester Hall. Each dormitory student, after registering, will proceed immediately to the Dormitory Manager's office to receive his room key and take possession of his room. Instructions regarding the rules for the dormitories will be given to the student at this time.

All freshmen boys, except those who live at home, are required to room in the dormitories and board at the University dining hall.

All dormitory property assigned to the individual student will be charged against him, and the parent or guardian must assume responsibility for its possession without destruction other than that which may result from ordinary wear and tear.

All students assigned to dormitories are required to provide themselves with sufficient single blankets, at least two pairs of single sheets, three pillow cases, six towels, a pillow, a laundry bag, a broom, and a waste basket.

Room Reservations. All students who are to room in the dormitories must register their names and selection of rooms with the Dormitory Manager, and deposit \$5.00 with the Cashier as a reserve fee. This fee will be deducted from the first semester charges when the student registers; if he fails to register, the fee will be forfeited. Reservations may be made at any time during the closing month of the school year by students already in the University. Students who are applying for admission to the University should signify their desire to reserve a room, and accompany this request with a remittance of \$5.00.

Keys. Students who withdraw from the dormitories at any time and fail to surrender their keys to the Dormitory Manager immediately will be subject to a charge of \$1.00.

WITHDRAWALS

Students registering for the dormitories and dining hall must continue for the year, as contracts for faculty and other service and for supplies are made on an annual basis, and fees are fixed on the supposition that students will remain for the entire year.

A student desiring to withdraw from the University must secure the written consent of the parent or guardian, to be attached to the withdrawal slip, which must be approved by the Dean and presented to the Registrar at least one week in advance of withdrawal. Charges for full time will be continued against him unless this is done. Withdrawal slips must bear the approval of the President and the Financial Secretary before being presented to the Cashier for refund.

REFUNDS

For withdrawal within five days full refund of fixed charges, library fee, athletic fee, and reserve fee, with a deduction of \$5.00 to cover cost of registration. All refunds for board, lodging, and laundry will be pro-rated.

After five days, and until November 1, refunds on all charges will be pro-rated, with a deduction of \$5.00 to cover cost of registration.

After November 1, refunds will be granted for board and laundry only, amounts to be pro-rated.

No refunds will be made without the written consent of the student's parent or guardian, except to students who pay their own expenses.

No student will be given cash for any part of his or her refund until all outstanding checks have been honored by the bank on which they are drawn.

EXPENSES AT BALTIMORE

The fees and expenses for the schools located in Baltimore are:

	Matriculation	Tuition		Laboratory	Graduation
		Resident	Non-Resident		
Medicine	\$10.00 (once only)	\$300.00	\$450.00	\$20.00 yr.	\$15.00
*Dentistry	10.00 (once only)	200.00	250.00	20.00 yr.	15.00
Pharmacy	10.00 (once only)	200.00	250.00	20.00 yr.	10.00
Law (night).....	10.00 (once only)	150.00	200.00	15.00
(day)	10.00 (once only)	200.00	250.00	15.00

Applicants for admission to any of the schools are charged a record investigation fee of \$2.00.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect to earn enough money to pay all of his expenses. The amounts vary from nearly nothing to one-half or three-fourths of all the required funds for a college education.

Generally the first year is the hardest for students desiring employment. After the student has demonstrated that he is worthy and capable, there is much less difficulty finding employment.

The University assumes no responsibility in connection with employment. It does, however, maintain a bureau to aid students who desire employment. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of the students.

HONORS AND AWARDS

SCHOLARSHIP HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half.

* Students are required to pay, once only, a dissecting fee of \$15.00.
Note—Late registration fee, \$5.00.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the man from Prince George's County who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Phi Sigma Medal. The Delta Chapter of Sigma Phi Sigma Fraternity offers annually a gold medal to that freshman who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to that sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Interfraternity Scholastic Trophy. The Delta Mu Fraternity has presented to the University a silver trophy, which is awarded annually to that fraternity which had the highest average in scholarship for the preceding scholastic year. It becomes the permanent property of the fraternity that wins it three times.

Chemical Alumni Scholarship. The Chemical Alumni of the University of Maryland give a scholarship to the boy or girl in the State writing the best essay, as a result of the National Prize Essay Contest, of the American Chemical Society.

The Sigma Delta Sorority offers annually a loan of one hundred dollars (\$100.00), without interest, to any woman student registered in the University of Maryland and selected by the Scholarship Committee—the said Committee to be composed of the deans of all Colleges in which girls are registered, including the Dean of Women and the Dean of the Graduate School.

PUBLIC SPEAKING AWARDS

President's Cup for Debate. An annual debate is held each year in January between the Poe and New Mercer Literary Societies for the "President's Cup," given by Dr. H. J. Patterson.

Alumni Medal for Debate. A gold medal is awarded by the Alumni Association each year to the best debater in the University, the test being a debate between picked teams from the two literary societies.

Public Speaking Prize. A prize of \$25.00 in gold is given annually by Mr. W. D. Porter, of Hyattsville, Maryland, to be awarded to that student in the University who makes most improvement in the ability "to stand and think and to so express his thoughts while standing as to transmit them to his fellow-men accurately and in a common-sense way."

The Oratorical Association of Maryland Colleges, consisting of Washington College, Western Maryland College, St. John's College, and University of Maryland, offers each year gold medals for first and second places in an oratorical contest that is held between representatives of the four institutions.

OTHER MEDALS AND PRIZES

Athletics. The class of 1908 offers annually to "the man who typifies the best in college athletics" a gold medal. The medal is given in honor of former President R. W. Silvester, and is known as "The Silvester Medal for Excellence in Athletics."

Military Medal. The class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

Company Sword. The class of 1897 awards annually to the captain of the best-drilled company of the University battalion a silver-mounted sword.

Citizenship Prize. A gold watch is presented annually by H. C. Byrd, a graduate of the class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

STUDENT ACTIVITIES

The following description of student activities covers those of the undergraduate divisions at College Park. The description of student activities in the Baltimore divisions is included in the appropriate chapters in Section II.

GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies, for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities, except those which are controlled by a special board or faculty

committee, are under the supervision of the Committee on Student Affairs, subject to the approval of the President. Such organizations are formed only with the consent of the Committee on Student Affairs and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students.

The "Students' Handbook," issued annually and distributed to the students in the fall, contains full information in regard to student activities as well as in regard to academic regulations. Some of the more important items are given here.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. No student while on probation may represent the University in such events as athletic contests, glee club concerts, dramatic performances, and debates.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably, and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are eliminated. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

Student Government. The General Students' Assembly consists of all the students and is the instrument of student government. It operates under a constitution. Its officers are a President, Vice-President, and Secretary, and an Executive Council representative of the several college classes.

The Students' Assembly meets the second Wednesday of each month at 11.20 o'clock in the Auditorium for the transaction of business which concerns the whole student body. On alternate Wednesdays a program is arranged by the officers with the aid of the Department of Public Speaking. The Students' Executive Council, with the aid of the Committee on Student Affairs, which acts as an advisory board to the Council, performs the executive duties incident to managing student affairs.

Women Students' Government Association is an organization comprising all the women students, for the management of all affairs concerning the women students exclusively. It operates under a constitution. Its officers are the same as those of the General Students' Assembly. Its Executive Council has the advisory co-operation of the Dean of Women.

SOCIETIES

Honorary Fraternities. There are eleven honorary fraternities and societies in the University at College Park, organized to uphold scholastic and cultural standards in their respective fields. These are: Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Alpha Zeta, a national honorary agricultural fraternity recognizing scholarship and student leadership; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attainments in extra curricular activities and general leadership; Sigma Delta Pi, a national honorary Spanish fraternity; Alpha Chi Sigma, a national honorary chemical fraternity; Scabbard and Blade, a national military society; Phi Mu, a local honorary engineering fraternity; The Women's Senior Honor Society, a local organization recognizing conspicuous attainments; Theta Gamma, a local Home Economics society; Gamma Alpha Nu (Journalistic), local; Alpha Psi Omega (Iota Chapter)—dramatic.

Fraternities and Sororities. There are eight national and five local fraternities, and one national and three local sororities at College Park. These in the order of their establishment at the University are: Kappa Alpha, Sigma Phi Sigma, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Alpha Gamma Rho, Phi Alpha, and Tau Epsilon Phi (national fraternities), and Alpha Omicron Pi (national sorority); and Nu Sigma Omicron, Delta Phi Omega, Delta Mu, Sigma Tau Omega, and Alpha Phi Sigma (local fraternities), and Sigma Delta, Kappa Xi, and Alpha Upsilon Chi (local sororities).

Miscellaneous Clubs and Societies. Many clubs and societies, with literary, scientific, social, and other special objectives are maintained in the University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Authorship Club, Engineering Society, Hort Club, Latin American Club, Le Cercle Francais, Live Stock Club, New Mercer Literary Society, Poe Literary Society, Calvert Forum, Women's Athletic Association, Girls' "M" Club, Footlight Club, Debating Team, Rossbourg Club.

Student Grange. The Student Grange is a chapter of the national fraternity. With the exception of two faculty advisers, the Student Grange membership is made up entirely from the student body. New members are elected by ballot when they have proved their fitness for the organization.

The general purposes of the Student Grange are to furnish a means through which students keep in touch with State and national problems of agricultural, economic, or general educational nature; to gain experience in putting into practice parliamentary rules; to learn the meaning of leadership and to learn how to assume leadership that aids in the ultimate task of serving in one's community.

MUSICAL ORGANIZATIONS

Six musical organizations are maintained in the University.

Chorus. Membership in the Chorus is open to all students, and to persons residing in the community. Oratorios and standard part-songs are studied. Rehearsals are held weekly.

Glee Club. A Glee Club, of limited membership, is recruited from the best vocal talent among the men of the University. Admission is gained through tests or "try-outs," conducted at the beginning of the school year. The club holds three rehearsals a week. Public concerts are given.

Opera Club. The "Maryland Opera Club" was established in 1923, and gave its first performance in the spring of 1924. Its object is to foster and promote music in connection with dramatic art, and to develop and direct musical talent of students in the University. One or more public performances are given each year.

Symphony Orchestra. It is the purpose of the Symphony Orchestra to study the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students are eligible for membership who play orchestral instruments. At least one rehearsal of two hours' duration is held each week, and all players are expected to take part in public performances.

Military Band. This organization, of limited membership, is a part of the military organization of the University, and is subject to the restrictions and discipline of the Department of Military Science and Tactics.

Student Band. The Student Band is the outcome of a long felt need for organized band music at the various functions of the University including athletic activities. This organization meets once a week. "Try-outs" for membership are held early in the year.

RELIGIOUS INFLUENCES

Religious Work Council. The Religious Work Council, comprising the President of the University, acting as chairman, all Student Pastors officially appointed by the Churches for work with the students of their respective faiths, and representative students, focalizes, reviews, and stimulates the religious thought and activity of the student body. This Council has an executive secretary with an office in the Agricultural Building, who is daily at the service of the students and the churches.

Every assembly of the University is opened with religious exercises conducted by one of the Student Pastors or by some other clergyman secured for the purpose.

While there is no interference with any one's religion, religion itself is recognized, and every possible provision made that the student may keep in contact with the church of his choice.

The Christian Associations. The Young Men's Christian Association and the Young Women's Christian Association help direct the religious activities of the men and women students, respectively. In addition, they perform other important functions, such as welcoming new students, and promoting morale and good fellowship in the student body. The two Associations, in co-operation with the Committee on Student Affairs, publish and distribute free of charge the Student's Handbook to each student at the beginning of the scholastic year. This handbook contains detailed information in regard to registration, academic regulations, and student activities.

The Program Committees of the two Associations provide organized programs of religious study running through the college year.

The Discussion Group, organized and conducted by the students, meets Sunday evening for the discussion of important religious, social, and political questions, both national and international.

The Episcopal Club. The Episcopal Club is an organization of the Episcopal students (both men and women) and their friends, banded together for mutual fellowship and Christian service. It is a duly recognized unit of the National Student Council of the Protestant Episcopal Church.

STUDENT PUBLICATIONS

The two student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback. A weekly, six page newspaper, the Diamondback, is published by the students. This publication summarizes the University news, and provides a medium for discussion of matters of interest to the students and the faculty.

The Reveille is the student annual, published by the Junior Class. It is a reflection of student activities serving to commemorate the outstanding events of the college year.

ALUMNI ORGANIZATION

The alumni are divided into several organizations, which elect representatives to the Alumni Council, an incorporated body which manages all general alumni affairs. Different alumni units represent the Medical School, the Pharmacy School, the Dental School, the Law School, the School of Nursing, while the group of colleges at College Park are represented by one unit. This College Park unit is governed by a board made up of representatives from each of the colleges located at College Park.

The Alumni Council is made up of elected representatives from the several units, with a membership of twenty-four. Each alumni unit in Baltimore elects two representatives to the Council; the alumni representing the College Park group of colleges elect twelve representatives.

SECTION II

Administrative Divisions

COLLEGE OF AGRICULTURE

HARRY J. PATTERSON, *Dean*

Agriculture is the primary pursuit of the human race, and permanent prosperity is in direct proportion to the producing capacity of the land. Land-Grant Colleges were founded to foster the teaching of scientific agriculture. The primary aim of the College of Agriculture of the University of Maryland is to teach the best and most practical methods of farm production, the economics of marketing and distribution, and methods of improving the economic and social position of the farmer. Agriculture is constantly changing; no cropping system can be worked out once and for all time; new as well as old pests and diseases must be constantly combated; better feeding and breeding of live stock and more efficient marketing methods must be substituted for the old and inefficient methods if agriculture is to maintain its importance with the other industries. Above all, agriculture must be made profitable to the tiller of the soil and must be established as a paying business for those who engage in it, as well as for town and city dwellers.

The curricula of the College of Agriculture are planned to give the student thorough and practical instruction in agriculture and related sciences, and at the same time afford an opportunity to specialize along the lines in which he is particularly interested. Likewise, instruction is given which will prepare students for teaching positions in agriculture, for governmental investigation and experimental work, for positions as county agents, farm bureau leaders, farm supervisors, as well as for farming.

Departments

The College of Agriculture includes the following departments: Agricultural Economics; Agronomy (including Crops and Soils); Animal Husbandry; Bacteriology; Botany; Dairy Husbandry; Entomology and Bee Culture; Farm Forestry; Farm Management; Farm Mechanics; Genetics and Statistics; Horticulture (including Pomology, Vegetable Gardening, Landscape Gardening, and Floriculture); Plant Pathology; Plant Physiology and Bio-chemistry; Poultry Husbandry.

Admission

The requirements for admission are the same as for other colleges and schools. See Section I, "Entrance."

Requirements for Graduation

One hundred and thirty-four semester hours are required for graduation. The prescribed work is the same for all freshmen and sophomores (except for those specializing in Bacteriology, Botany, Floriculture, Landscape Gardening, and Entomology); thereafter the work required varies according to the major and minor subjects pursued by the student.

Major Subject

Before the beginning of the third year the student chooses a department in which he will do his major work. After he chooses his major subject, some member of the department (appointed by the head of the department) will become the student's adviser in the selection of courses. The adviser may designate a minor subject if he deems it necessary.

The minimum requirements for a major in one department are fourteen semester hours, and the maximum hours permitted to count toward a degree are thirty-five semester hours.

Farm Practice

Students without farm experience do not, as a rule, secure full benefit from any of the agricultural courses. A committee has been appointed for the purpose of assisting all students coming to the college without farm training to obtain a fair knowledge of actual farm practice. Sometime during the year the committee will examine all members of the freshman class to determine whether or not their experience satisfies the farm practice requirements. Those not able to pass this examination will be required to spend at least three months on a farm designated or approved by the committee. If the student has had no experience whatsoever before entering college, he may be required to spend six to nine months on a farm. The committee reserves the right also to call on all students so placed for written reports showing the experience gained while on these farms.

Fellowships

A limited number of graduate fellowships which carry remuneration of \$500 to \$1000 yearly are available to graduate students. Students who hold these fellowships spend a portion of their time assisting in classes and laboratories. The rest of the time is used for original investigation or assigned study. (See Graduate School.)

CURRICULA IN AGRICULTURE

All students registered in the College of Agriculture take the same work in the freshman and sophomore years, except those who expect to specialize in bacteriology, botany, landscape gardening, floriculture, and entomology.

At the end of the sophomore year they may elect to specialize along the lines in which they are particularly interested.

	Semester	
	I	II
<i>Freshman Year</i>		
Gen'l Chem. and Qual. Analysis (Chem. 1y).....	4	4
*General Zoology (Zool. 1f).....	4	—
*General Botany (Bot. 1 s).....	—	4
Composition and Rhetoric (Eng. 1y).....	3	3
General Animal Husbandry (A. H. 1f).....	3	—
Principles of Vegetable Culture (Hort. 11 s).....	—	3
Reading and Speaking (P. S. 1y).....	1	1
Basic R. O. T. C. (M. I. 1y).....	1	1
	16	16
<i>Sophomore Year</i>		
‡Elements of Organic Chemistry (Chem. 12f).....	4	—
‡Agricultural Chemical Analysis (Chem. 13 s).....	—	3
Geology (Geol. 1f).....	3	—
Principles of Soil Management (Soils 1 s).....	—	3
Elementary Pomology (Hort. 1f).....	3	—
Field Crop Production (Agron. 1f and 2 s).....	3	3
Feeds and Feeding (A. H. 2f).....	3	—
Farm Dairying (D. H. 1 s).....	—	3
Basic R. O. T. C. (M. I. 2y).....	2	2
†Elective	—	3
	18	17

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

(For special requirements and curriculum see page 104, College of Education.)

* Offered each semester.

† Students should elect Principles of Economics (Econ. 3 s), or Poultry (P. H. 101 s), or General Entomology (Ent. 1 s), or General Bacteriology (Bact. 1 s).

‡ Students specializing in Agricultural Economics will substitute for chemistry the following courses:

Principles of Economics (Econ. 3 s).....	—	3
Agricultural Industry and Resources (A. E. 1f).....	3	—

AGRONOMY

In the Department of Agronomy are grouped the courses in farm crops, soils, and plant breeding.

The curriculum in farm crops aims to give the student the fundamental principles of crop production. Special attempt is made to adapt the work to the young man who wishes to apply scientific principles of field crop culture and improvement on the farm. At the same time enough freedom is given the student in the way of electives so that he may register for subjects which might go along with the growing of crops on his particular farm. A student graduating from the course in agronomy should be well fitted for general farming, investigational work in the State or Federal Experiment Stations, or county agent work.

The division of soils gives instruction in the physics, chemistry, and biology of the soil, the courses being designed to equip the future farmer with a complete knowledge of his soil and also to give adequate training to students who desire to specialize in soils. Students who are preparing to take up research or teaching are expected to take graduate work in addition to the regular undergraduate courses that are offered. The division possesses the necessary equipment and facilities for the instruction in these subjects, and in addition affords opportunities for the student to come in contact with the research at the Agricultural Experiment Station, especially in the pot culture laboratories, and on the experimental fields at the station and in other parts of the State.

Graduate students will find unusual opportunities to fit themselves for teaching soils in agricultural colleges, to conduct research in experiment stations, and to carry on work with the Bureau of Soils, United States Department of Agriculture.

Crops Division

	Semester	
	I	II
<i>Junior Year</i>		
Genetics (Gen. 101f).....	3	—
Grain and Hay Judging (Agron. 4f).....	1	—
Grading Farm Crops (Agron. 3 s).....	—	2
General Bacteriology (Bact. 1f).....	3	—
Soil Micro-Biology (Soils 104 s).....	—	3
Expository Writing (Eng. 5f and 6 s).....	2	2
General Plant Physiology (Plt. Phy. 1f).....	4	—
Principles of Economics (Econ. 3 s).....	—	3
Electives	4	6
	17	16

	Semester	
	I	II
<i>Senior Year</i>		
Crop Breeding (Agron. 103f).....	2	—
Advanced Genetics (Gen. 102 s).....	—	3
Agricultural Economics (A. E. 2f).....	3	—
Methods of Crop and Soil Investigations (Agron. 121 s).....	—	2
Cropping Systems and Methods (Agron. 120 s).....	—	2
Soil Surveying and Classification (Soils 5 f).....	3	—
Farm Drainage (F. Mech. 107 s).....	—	2
Farm Machinery (F. Mech. 101f).....	3	—
Farm Forestry (For. 1 s).....	—	3
Farm Management (F. M. 2f).....	4	—
Seminar (Agron. 203y).....	1	1
Electives	1	4
	17	17

Soils Division

<i>Junior Year</i>		
Expository Writing (Eng. 5f and 6 s).....	2	2
Principles of Economics (Econ. 3 s).....	—	3
General Bacteriology (Bact. 1f).....	3	—
Soil Micro-Biology (Soils 104 s).....	—	3
Fertilizers and Manures (Soils 2f).....	3	—
Soil Fertility (Soils 3 s).....	—	3
General Plant Physiology (Plt. Phy. 1f).....	4	—
Cropping Systems and Methods (Agron. 120 s).....	—	2
Electives	5	4
	17	17

<i>Senior Year</i>		
Agricultural Economics (A. E. 2f).....	3	—
Farm Management (F. M. 2f).....	4	—
Methods of Crop and Soil Investigations (Agron. 121 s).....	—	2
Soil Surveying and Classification (Soils 5f).....	3	—
Soil Technology (Soils 202y).....	3	3
Farm Drainage (F. Mech. 107 s).....	—	2
Seminar (Agron. 203y).....	1	1
Electives	3	8
	17	16

ANIMAL HUSBANDRY

The courses in animal husbandry have developed with the idea of teaching the essential principles underlying the breeding, feeding, develop-

ment, and management of livestock, together with the economics of the livestock industry.

The curriculum in animal husbandry is so planned as to allow plenty of latitude in the selection of courses outside of the department, thus giving the student a broad, fundamental training and fitting him to become the owner or superintendent of general or specialized livestock farms.

Opportunity for specialization is offered to those who may desire to become instructors or investigators in the field of animal husbandry.

Some livestock are maintained at the University. In addition, there are available, for use in instruction, the herds of livestock owned by the Federal Bureau of Animal Industry at Beltsville, Maryland. Through the courtesy of Maryland breeders, some private herds are also available for inspection and instruction.

	Semester	
	I	II
<i>Junior Year</i>		
Expository Writing (Eng. 5f and 6 s).....	2	2
General Bacteriology (Bact. 1f and 2 s).....	3	3
Principles of Economics (Econ. 3 s).....	—	3
Principles of Breeding (A. H. 3 s).....	—	3
*Swine Production (A. H. 4 s).....	—	3
Comparative Anatomy and Physiology (Bact. 106f).....	3	—
Genetics (Gen. 101f).....	3	—
Electives	6	3
	17	17
<i>Senior Year</i>		
Agricultural Economics (A. E. 1f).....	3	—
*Sheep Production (A. H. 7 s).....	—	3
Farm Machinery (F. Mech. 101f).....	3	—
Animal Hygiene (Bact. 108 s).....	—	3
Meat and Meat Products (A. H. 8f).....	2	—
Farm Drainage (F. Mech. 107 s).....	—	2
Physiological Chemistry (Chem. 104f).....	4	—
Seminar (A. H. 102y).....	1	1
Electives	4	7
	17	16

BACTERIOLOGY

The present organization of this department has been brought about with two main purposes in view. The first is to give all the students of the University an opportunity to obtain a general knowledge of the subject. This is of prime importance, as bacteriology is a basic subject, and is of as much fundamental importance as physics or chemistry. The second pur-

* Courses taken by both juniors and seniors in alternate years.

pose, and one for which this curriculum was designed, is to fit students for positions along bacteriological lines. This includes dairy bacteriologists and inspectors; soils bacteriologists; federal, state, and municipal bacteriologists for public health positions, research positions, commercial positions, etc. At present, the demand for persons qualified for this work is much greater than the supply. This condition is likely to exist for some time.

	Semester	
	I	II
<i>Sophomore Year</i>		
Elements of Organic Chemistry (Chem. 12f).....	4	—
Agricultural Chemical Analysis (Chem. 13 s).....	—	3
*Physics (Phys. 3 s) or Principles of Economics (Econ. 3 s).....	—	3
General Bacteriology (Bact. 1f and 2 s).....	3	3
R. O. T. C. (M. I. 2y).....	2	2
Electives	8	6
	17	17
<i>Junior Year</i>		
Dairy Bacteriology (Bact. 101y).....	3	3
Expository Writing (Eng. 5f and 6 s).....	2	2
Advanced Bacteriology (Bact. 102).....	—	3
Electives	12	9
	17	17
<i>Senior Year</i>		
Advanced Bacteriology (Bact. 102y).....	3	3
General Physiological Chemistry (Chem. 104f).....	4	—
Genetics (Gen. 101f).....	3	—
Statistics (Gen. 111f).....	2	—
Hematology (Bact. 103 s).....	—	2
Seminar (Bact. 110y).....	1	1
Electives	4	11
	17	17

BOTANY

The courses listed for the curriculum in botany make a kind of skeleton of essentials to which the student adds the individual requirements to make a complete four-year course. No electives are permitted in the freshman year, but thereafter the leeway increases to the senior year, where half of the courses are elected or selected to fit the individual needs of the student. This leeway is thought to be important because all students do not have the same ends in view. They may wish to prepare to be teachers, investigators in state or government experiment stations, inspectors in the

* Only those students who are excused from Physics will take Economics.

field, or for any other vocations which botanists follow. The curriculum as outlined lays the foundation for graduate work leading to higher degrees.

	Semester	
	I	II
<i>Freshman Year</i>		
General Chemistry and Qualitative Analysis (Chem. 1y).....	4	4
General Botany (Bot. 1f and 2 s).....	4	4
Composition and Rhetoric (Eng. 1y).....	3	3
Reading and Speaking (P. S. 1y).....	1	1
Modern Language (French or German).....	3	3
Basic R. O. T. C. (M. I. 1y).....	1	1
	16	16
	Semester	
	I	II
<i>Sophomore Year</i>		
Organic Chemistry (Chem. 12f).....	4	—
Expository Writing (Eng. 5f and 6 s).....	2	2
Mathematics (Math. 1f and 2 s).....	3	3
Zoology (Zool. 1 s).....	—	4
Modern Language	3	3
General Mycology (Bot. 4 s).....	—	2
Systematic Botany (Bot. 3 s).....	—	2
Basic R. O. T. C. (M. I. 2y).....	2	2
Elective	3	—
	17	18
	Semester	
	I	II
<i>Junior Year</i>		
Physics (Phys. 1y).....	4	4
Plant Pathology (Plt. Path. 1f).....	3	—
Plant Physiology (Plt. Phy. 1f).....	4	—
Plant Ecology (Plt. Phy. 101 s).....	—	3
Genetics (Gen. 101f).....	3	—
Elective	3	10
	17	17
	Semester	
	I	II
<i>Senior Year</i>		
Botanical Electives:		
†Plant Anatomy (Bot. 101 s).....	—	2
†Methods in Plant Histology (Bot. 102 s).....	—	2
†Advanced Taxonomy (Bot. 103f).....	3	—
†Economic Botany (Bot. 105 s).....	—	2
†Diseases of Fruits (Plant Path. 101 s).....	—	2-4
†Diseases of Garden and Field Crops (Plant Path. 102 s).....	—	2-4
†Pathogenic Fungi (Plant Path. 109f).....	3	—
General Bacteriology (Bact. 1f).....	3	—

† Courses taken by both juniors and seniors in alternate years.

DAIRY AND ANIMAL HUSBANDRY

Dairy Husbandry

The Department of Dairy Husbandry offers courses in two major lines; namely, dairy production and dairy manufacture. The curriculum in each of these lines is so arranged as to give the student an intimate knowledge of the science and facility in the art of dairy husbandry practice. The dairy production option is so organized as to meet the specific requirements of students who are especially interested in the care, feeding, breeding, management, and improvement of dairy cattle and in the production and sale of market milk.

The option in Dairy Manufactures is planned to meet the particular demands of students who are especially interested in the processing and distribution of milk, in dairy plant operation, and in the manufacture and sale of butter, cheese, ice-cream, and other milk products.

The dairy herd and the dairy manufacture and plant laboratories are available to students for instruction and for research. Excellent opportunity is, therefore, afforded to both advanced undergraduate and graduate students for original investigation and research. Graduates in the courses in dairy husbandry should be well qualified to become managers of dairy farms, teachers, investigators in the State and Federal Agricultural Experiment Stations, or to enter the field of commercial dairying.

DAIRY HUSBANDRY

Dairy Manufacture

	Semester	
	I	II
<i>Junior Year</i>		
Expository Writing (Eng. 5f and 6 s).....	2	2
Principles of Economics (Econ. 3 s).....	—	3
General Bacteriology (Bact. 1f).....	3	—
General Accountancy (Econ. 109y).....	3	3
Dairy Chemistry (Chem. 106s).....	—	4
Dairy Manufacturing (D. H. 4y).....	3	3
Market Milk (D. H. 5f).....	4	—
Electives	2	2
	17	17
	Semester	
	I	II
<i>Senior Year</i>		
Agricultural Economics (A. E. 1f).....	3	—
Market Milk (D. H. 5f).....	4	—
Dairy Manufacturing (D. H. 4y).....	3	3
Dairy Bacteriology (Bact. 101).....	3	—

	Semester	
	I	II
Dairy Plant Technique (D. H. 7s).....	—	2
Marketing of Farm Products (A. E. 102s).....	—	3
Co-operation in Agriculture (A. E. 103f).....	3	—
Seminar	1	1
Electives	—	7
	17	16

Dairy Production

Junior Year

Expository Writing (Eng. 5f and 6s).....	2	2
Principles of Economics (Econ. 3s).....	—	3
General Bacteriology (Bact. 1f).....	3	—
Dairy Production (D. H. 2f).....	3	—
Principles of Breeding (A. H. 3s).....	—	3
Advanced Dairy Cattle Judging (D. H. 3s).....	—	1
Genetics (Gen. 101f).....	3	—
Farm Drainage (F. Mech. 107s).....	—	2
Electives	6	6
	17	17

Senior Year

Agricultural Economics (A. E. 2f).....	3	—
Market Milk (D. H. 5f).....	4	—
Dairy Bacteriology (Bact. 101).....	3	—
Animal Hygiene (Bact. 108s).....	—	3
Seminar (D. H. 103y).....	1	1
Electives	6	12
	17	16

ENTOMOLOGY

This department is concerned with the teaching of entomology to all agricultural students as a basis for future work in pest control, in the preparation of technically trained entomologists, and in furnishing certain courses to students in Arts and Sciences and Education.

The success of the farmer and particularly the fruit grower is in a large measure dependent upon his knowledge of the methods of preventing or combating the pests that menace his crops each year. Successful methods of control are emphasized in the economic courses.

There is an ever-increasing demand for trained entomologists. The fact that the entomological work of the Experiment Station, the Extension Service, the College of Agriculture, and the office of the State Entomologist

are in one administrative unit, enables the student in this department to avail himself of the many advantages accruing therefrom. Advanced students have special advantages in that they may be assigned to work on station projects already under way.

Freshman Year

	Semester	
	I	II
General Chemistry and Qualitative Analysis (Chem. 1y).....	4	4
General Zoology (Zool. 1f).....	4	—
General Botany (Bot. 1s).....	—	4
Introductory Entomology (Ent. 1).....	—	3
Composition and Rhetoric (Eng. 1y).....	3	3
French (1) or German (1).....	3	3
Basic R. O. T. C. (M. I. 1y).....	1	1
	15	18

Sophomore Year

Physics (Phys. 1y).....	4	4
Elements of Organic Chemistry (Chem. 12f).....	4	—
Agricultural Chemical Analysis (Chem. 13s).....	—	3
Expository Writing (Eng. 5f and 6s).....	2	2
French (3y) or German (3y).....	3	3
Intermediate Entomology (Ent. 2y).....	3	3
Basic R. O. T. C. (M. I. 2y).....	2	2
	18	17

Junior Year

Economic Entomology (Ent. 101y).....	3	3
*Economic Entomology (Ent. 102y).....	2	2
Economic Zoology (Zool. 4s).....	—	1
General Bacteriology (Bact. 1f and 2s).....	3	3
Electives	9	8
	17	17

Senior Year

*Insect Pests of Special Groups (Ent. 104y).....	4	4
Special Problems (Ent. 4y).....	2	2
Seminar (Ent. 103y).....	1	1
Electives	9	9
	16	16

* Courses taken by both juniors and seniors in alternate years.

Electives in Botany, particularly Plant Physiology and Plant Pathology, are urged as especially desirable for most students specializing in entomology.

FARM MANAGEMENT AND AGRICULTURAL ECONOMICS

In this department are grouped courses in farm management and agricultural economics.

Farm management has been defined as the business of the individual farmer to organize his business so as to produce the greatest continuous profit. This can be done, however, only when the organization is in accordance with the broader principles of agricultural economics. It requires not only knowledge of many factors involved in the production of crops and animals, but also administrative ability to co-ordinate them into the most efficient farm organization. Farming is a business, and as such demands for its successful conduct the use of business methods. As a prerequisite to the technical farm management course there is offered a course in farm accounting. This course is not elaborate, but is designed to meet the need for a simple yet accurate system of farm business records.

The aim of the farm management course is to assist the student to perceive the just relationship of the several factors of production and disposition as applicable to local conditions, and to develop in him executive and administrative capacity.

Agricultural economics considers the fundamental principles underlying production, distribution, and consumption, more especially as they bear upon agricultural conditions. Land, labor, and capital are considered in their relationship to agriculture.

The farmer's work does not end with the production of crops or animal products. More and more it is evident that economical distribution is as important a factor in farming as is economical production.

Students well trained in farm management and agricultural economics are in demand for county agent work, farm bureau work, experiment station or United States Government investigation, and college or secondary school teaching.

	Semester	
	I	II
<i>Junior Year</i>		
Agricultural Economics (A. E. 1f).....	3	—
Marketing of Farm Products (A. E. 102s).....	—	3
Farm Accounting (F. M. 1s).....	—	3
Business Law (Econ. 107f and 108s).....	3	3
Grading Farm Crops (Agron. 3s).....	—	2
Business Organization (Econ. 105f).....	2	—
Statistics (Gen. 111 and 112).....	2	2
Expository Writing (Eng. 5f and 6s).....	2	2
Electives	5	2
	17	17

Senior Year

	Semester	
	I	II
Co-operation in Agriculture (A. E. 103f).....	3	—
Transportation of Farm Products (A. E. 101s).....	—	3
Seminar (A. E. 105y).....	1-3	1-3
Farm Management (F. M. 2f).....	4	—
Farm Machinery (F. Mech. 101f).....	3	—
Agricultural Finance (A. E. 104s).....	—	3
Rural Life and Education (Ag. Ed. 102 s).....	—	3
Public Finance (Econ. 104f).....	2	—
Electives	1-3	4-6
	16	16

FARM MECHANICS

The Department of Farm Mechanics is organized to offer students of agriculture training in those branches of agriculture which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery, farm buildings, and farm drainage.

The modern tendency in farming is to replace hand labor, requiring the use of many men, by large machines, which do the work of many men yet require only one man for their operation. In many cases horses are being replaced by tractors to supply the motive force for these machines. Trucks, automobiles, and stationary engines are found on almost every farm. It is highly advisable that the student of any branch of agriculture have a working knowledge of the construction and adjustments of these machines.

About one-sixth of the total value of farms is invested in the buildings. The study of the design of the various buildings, from the standpoint of convenience, economy, and appearance, is, therefore, important.

The study of drainage includes the principles of tile drainage, the laying out and construction of tile drain systems, the use of open ditches, and a study of the Maryland drainage laws.

GENERAL AGRICULTURE

Those who do not care to specialize in any particular phase of agriculture will pursue the following curriculum:

	Semester	
	I	II
<i>Junior Year</i>		
Diseases of Plants (Plt. Path. 1f).....	3	—
General Plant Physiology (Plt. Phy. 1f).....	4	—
General Bacteriology (Bact. 1f).....	3	—
Expository Writing (Eng. 5f and 6s).....	2	2
Farm Poultry (P. 101s).....	—	3
Genetics (Gen. 101f).....	3	—

	Semester	
	I	II
Farm Accounting (F. M. 1s).....	—	3
Principles of Breeding (A. H. 3s).....	—	3
Principles of Economics (Econ. 3s).....	—	3
Electives	2	3
	—	—
<i>Senior Year</i>	17	17
Agricultural Economics (A. E. 2f).....	3	—
Farm Management (F. M. 2f).....	4	—
Farm Machinery (F. Mech. 101f).....	3	—
Gas Engines, Tractors, and Automobiles (F. Mech. 102s).....	—	4
Cropping Systems and Methods (Agron. 120s).....	—	2
Farm Drainage (F. Mech. 107s).....	—	2
Farm Forestry (Forestry 1s).....	—	3
Electives	7	5
	—	—
	17	16

GENETICS AND STATISTICS

Rapid accumulation of knowledge in the field of genetics has revolutionized the viewpoint of those interested in plant and animal breeding and in eugenics.

Teachers and investigators have increasing occasion to interpret statistical data presented by others, as well as to gather and organize original material.

The Department of Genetics and Statistics is organized to offer students training in (1) the principles of heredity and genetics, and (2) the tools and methods employed in statistical description and induction.

HORTICULTURE

There are several reasons why the State of Maryland should be pre-eminent in the different lines of horticulture and offer such excellent opportunities for horticultural enterprises. A few of the more evident ones are the wide variation in soil and climate from the Eastern Shore to the mountainous counties of Allegheny and Garrett in the west, the nearness to all of the large Eastern markets, and the large number of railroads, interurban lines, and waterways, all of which combine to make marketing easy and comparatively cheap.

The Department of Horticulture offers four major lines of work; namely, pomology, olericulture, floriculture, and landscape gardening. Students wishing to specialize in horticulture can arrange to take a general course during the four years, or enough work is offered in each division to allow students to specialize during the last two years in any of the four divisions.

The courses have been planned to cover such subject matter that upon their completion students should be fitted to engage in commercial work, or county agent work, or for teaching and investigational work in the State and Federal institutions.

The department has at its disposal about twenty acres of ground devoted to vegetable gardening, eighteen acres of orchards, small fruits, and vineyards, and twelve greenhouses, in which flowers and forcing crops are grown. Members of the teaching staff are likewise members of the experiment station staff, and hence students have an opportunity to become acquainted with the research which the department is carrying on. Excellent opportunity for investigating new problems is afforded to advanced undergraduates and to graduate students.

Students who intend to specialize in pomology or olericulture are required to take the same subjects which other agricultural students take during the first two years. Students who specialize in floriculture or landscape gardening, however, will take slightly different curricula. It is felt that such students require certain special courses, which it is unnecessary to require of all agricultural students. The curricula follow:

Pomology

	Semester	
	I	II
<i>Junior Year</i>		
Principles of Economics (Econ. 3s).....	—	3
Systematic Pomology (Hort. 2f).....	3	—
Small Fruit Culture (Hort. 4s).....	—	2
Fruit and Vegetable Judging (Hort. 5f).....	2	—
Expository Writing (Eng. 5f and 6s).....	2	2
General Plant Physiology (Plt. Phy. 1f).....	4	—
General Floriculture (Hort. 21s).....	—	2
Diseases of Plants (Plt. Path. 1f).....	3	—
Introductory Entomology (Ent. 1s).....	—	3
Genetics (Gen. 101f).....	3	—
Electives	—	5
	—	—
	17	17
<i>Senior Year</i>		
Commercial Fruit Growing (Hort. 101f).....	3	—
Economic Fruits of the World (Hort. 102f).....	2	—
Horticultural Seminar (Hort. 43y).....	1	1
General Landscape Gardening (Hort. 31s).....	—	2
Farm Management (F. M. 2f).....	4	—
Horticultural Breeding Practices (Hort. 41s).....	—	1
Horticultural Research and Thesis (Hort. 42y).....	2	2
Electives	5	10
	—	—
	17	16

Olericulture

	Semester	
	I	II
<i>Junior Year</i>		
Principles of Economics (Econ. 3s).....	—	3
Small Fruit Culture (Hort. 4s).....	—	2
Diseases of Plants (Plt. Path. 1f).....	3	—
Genetics (Gen. 101f).....	3	—
Expository Writing (Eng. 5f and 6s).....	2	2
General Floriculture (Hort. 21s).....	—	2
General Plant Physiology (Plt. Phy. 1f).....	4	—
Fruit and Vegetable Judging (Hort. 5f).....	2	—
Truck Crop Production (Hort. 12f).....	3	—
Vegetable Forcing (Hort. 13s).....	—	3
Introductory Entomology (Ent. 1s).....	—	3
Electives	—	2
	17	17
<i>Senior Year</i>		
Farm Management (F. M. 2f).....	4	—
General Landscape Gardening (Hort. 31s).....	—	2
Horticultural Breeding Practices (Hort. 41s).....	—	1
Tuber and Root Crops (Hort. 103f).....	2	—
Systematic Olericulture (Hort. 105f).....	3	—
Advanced Truck Crop Production (Hort. 104s).....	—	2
Horticultural Research and Thesis (Hort. 42y).....	2	2
Horticultural Seminar (Hort. 43y).....	1	1
Electives	5	8
	17	16

Floriculture

<i>Sophomore Year</i>		
Elements of Organic Chemistry (Chem. 12f).....	4	—
Agricultural Chemical Analysis (Chem. 13s).....	—	3
General Plant Physiology (Plt. Phy. 1f).....	4	—
Geology (Geo. 1f).....	3	—
Principles of Soil Management (Soils 1s).....	—	3
General Landscape Gardening (Hort. 31s).....	—	2
Elementary Pomology (Hort. 1f).....	3	—
Basic R. O. T. C. (M. I. 2y).....	2	2
Electives	1	7
	17	17

Junior Year

	Semester	
	I	II
*Greenhouse Management (Hort. 22y).....	3	3
Floricultural Practice (Hort. 23y).....	2	2
Floricultural Trip (Hort. 27s).....	—	1
*Greenhouse Construction (Hort. 24s).....	—	2
*Garden Flowers (Hort. 26f).....	3	—
Expository Writing (Eng. 5f and 6s).....	2	2
Principles of Economics (Econ. 3s).....	—	3
Diseases of Plants (Plt. Path. 1f).....	3	—
Systematic Botany (Bot. 3s).....	—	2
Elements of Landscape Design (Hort. 32f).....	3	—
Electives	1	2
	17	17

Senior Year

*Commercial Floriculture (Hort. 25y).....	3	3
Plant Materials (Hort. 106y).....	2	3
Vegetable Forcing (Hort. 13s).....	—	3
Agricultural Economics (A. E. 2f).....	3	—
Horticultural Breeding Practices (Hort. 41s).....	—	1
Horticultural Seminar (Hort. 43y).....	1	1
Horticultural Research and Thesis (Hort. 42y).....	2	2
Diseases of Ornamentals (Plt. Path. 105s).....	—	2
Electives	6	2
	17	17

Landscape Gardening

Freshman Year

Gen. Chem. and Qual. Anal. (Chem. 1y).....	4	4
General Zoology (Zool. 1f).....	4	—
General Botany (Bot. 1 s).....	—	4
Composition and Rhetoric (Eng. 1y).....	3	3
Reading and Speaking (P. S. 1y).....	1	1
Algebra (Math. 1f); Trigonometry (Math. 2 s).....	3	3
Basic R. O. T. C. (M. I. 1y).....	1	1
	16	16

Sophomore Year

French or German.....	3	3
Plant Physiology (Plt. Phy. 1f).....	4	—
Geology (Geol. 1f).....	3	—

* Courses taken by both juniors and seniors in alternate years.

	Semester	
	I	II
Principles of Soil Management (Soils 1 s).....	—	3
Plane Surveying (Sur. 1f and 2 s).....	1	2
*General Landscape Gardening (Hort. 31 s).....	—	2
Expository Writing (Eng. 5f and 6 s).....	2	2
Engineering Drafting (Dr. 1y).....	1	1
Basic R. O. T. C. (M. I. 2y).....	2	2
Electives	1	2
	—	—
	17	17

Junior Year

Elementary Pomology (Hort. 1f).....	3	—
†Plant Materials (Hort. 106y).....	2	3
†History of Landscape Gardening (Hort. 35f).....	1	—
*Elements of Landscape Design (Hort. 32f).....	3	—
†Landscape Design (Hort. 33s).....	—	3
†Garden Flowers (Hort. 26f).....	3	—
Principles of Economics (Econ. 3 s).....	—	3
Diseases of Plants (Plt. Path. 1f).....	3	—
Systematic Botany (Bot. 3 s).....	—	2
Farm Drainage (F. Mech. 107 s).....	—	2
Electives	2	4
	—	—
	17	17

Senior Year

†Landscape Design (Hort. 34f).....	3	—
†Landscape Construction and Maintenance (Hort. 36f).....	1	—
†Civic Art (Hort. 37 s).....	—	2
Horticultural Research and Thesis (Hort. 42y).....	2	2
Horticultural Seminar (Hort. 43y).....	1	1
Electives	10	12
	—	—
	17	17

POULTRY HUSBANDRY

The course in Poultry Husbandry is designed to give the student a broad view of the practices of poultry raising. Those students who expect to develop into teachers, extension workers, or investigators should choose as electives such subjects as psychology, economic history, sociology, philosophy, political science, and kindred subjects.

* Courses taken by both sophomores and juniors in alternate years.

† Courses taken by both juniors and seniors in alternate years.

	Semester	
	I	II
<i>Junior Year</i>		
Poultry Production (Poultry 103 s).....	—	4
Expository Writing (Eng. 5f and 6 s).....	2	2
General Bacteriology (Bact. 1f and 2 s).....	3	3
Genetics (Gen. 101f).....	3	—
Poultry Keeping (Poultry 102f).....	4	—
Principles of Economics (Econ. 3 s).....	—	3
Electives	5	5
	—	—
	17	17

Senior Year

Agricultural Economics (A. E. 2f).....	3	—
Farm Management (F. M. 2f).....	4	—
Farm Accounting (F. M. 1 s).....	—	4
Animal Hygiene (Bact. 108 s).....	—	3
Poultry Breeds (Poultry 104 f).....	4	—
Poultry Management (Poultry 105 s).....	—	4
Marketing Farm Products (A. E. 102 s).....	—	3
Electives	6	2
	—	—
	17	16

SPECIAL STUDENTS IN AGRICULTURE

Mature students who have fulfilled the regular college entrance requirements and are not candidates for degrees may, on consent of the dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of each individual. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive a card granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruit-growers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

The regular charges are *\$5.00 for registration and \$1.00 per week for the time of attendance.

* One registration is good for any amount of regular or intermittent attendance during a period of four years.

TWO-YEAR COURSE IN FARMING

In response to many requests for such work, the College of Agriculture has organized a two-year Course in Farming.

This course is for students who have not the time or the preparation to enter any of the four-year courses in the College, but who desire to make farming their business in life and wish to bring to that business such a working knowledge of its underlying principles and practice as will aid them in making it a success.

Textbooks, lectures, and laboratory work are used to inculcate basic scientific principles. Well directed observations in field and forest, orchard and garden, barn and poultry yard, and actual hand work in them all demonstrate to the student the practical application of science on the farm, and familiarize him with the best practices in modern agriculture.

The two-year course is subcollegiate, and does not lead to a degree. No part of its work will be given collegiate credit.

Following is a synopsis of the course:

Two-Year Course in Farming

	Classes per Week	
	Semester I	Semester II
<i>First Year</i>		
Farm Chemistry	4	4
Soils and Fertilizers	7	—
Breeds of Livestock }	7	—
Judging Livestock }	7	—
Farm Arithmetic	3	—
Public Speaking	1	1
Fruit Growing	—	5
Vegetable Gardening	—	5
Feeding Animals	—	4
Farm Observation	—	1
	22	20
<i>Second Year</i>		
Farm Machinery	3	—
Farm Dairying	6	—
Crop Production }	6	—
Grain Judging }	6	—
Poultry	3	—
Farm Accounting	3	—
Farm Management	—	5
Marketing	—	3
Cement Work	—	1
Farm Woodwork	—	1
Gas Engines	—	4
Farm Forestry	—	3
	21	17

AGRICULTURAL EXPERIMENT STATION

HARRY J. PATTERSON, *Director*.

The agricultural work of the University naturally comprises three fields: research, instruction, and extension. The Agricultural Experiment Station is the research agency of the University, which has for its purpose the increase of knowledge relating to agriculture, primarily for the direct benefit of the farmer. It is also the real source of agricultural information for use in the classroom and for demonstrations in the field.

The Experiment Station work is supported by both State and Federal appropriations. The Hatch Act, passed by Congress in 1887, appropriates \$15,000 annually; the Adams Act, passed in 1906, provides an additional \$15,000 annually; and the Purnell Act, passed in 1925, provides \$20,000 for the next fiscal year and an increase of \$10,000 each year until the amount reach \$60,000 annually.

The objects, purposes, and work of the Experiment Stations as set forth by these acts are as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The Purnell Act also permits the appropriation to be used for conducting investigations and making experiments bearing on the manufacture, preparation, use, distribution, and marketing of agricultural products, and for such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life.

The Maryland Station, in addition to the work conducted at the University, operates a sub-station farm of fifty acres at Ridgely, Caroline County, and a farm of about sixty acres at Upper Marlboro for tobacco investigations. Experiments in co-operation with farmers are conducted at many

different points in the State. These tests consist of studies with soils, fertilizers, crops, orchards, insect and plant disease control, and stock feeding.

The results of the Experiment Station work during the past quarter of a century have developed a science of agriculture to teach, and have laid a broad and substantial foundation for agricultural development. The placing of agricultural demonstrations and extension work on a national basis has been the direct outgrowth of the work of the Experiment Stations.

The students taking courses in agriculture are kept in close touch with the investigations in progress.

EXTENSION SERVICE

T. B. SYMONS, *Director*

The Extension Service is that branch of the University of Maryland, established by Federal and State law, which is designed to assist the farmer and his family in promoting the prosperity and welfare of agriculture and rural life. Its work is conducted in co-operation with the United States Department of Agriculture.

The Extension Service is represented in each county of the State by a county agent and in all but a few counties by a home demonstration agent. Through these agents and its staff of specialists, the Extension Service comes into intimate contact with rural people and with the problems of the farm and home.

Practically every phase of agriculture and rural home life comes within the scope of the work undertaken by the Extension Service. Farmers are supplied with details of crop and livestock production, and with instructions for controlling disease and insect pests; they are encouraged and aided in organized effort, helped with marketing problems, and in every way possible assisted in improving economic conditions on the farm.

Rural women are likewise assisted in the problems of the home. They are made acquainted with time and labor-saving devices, with simpler and easier methods of work, with new knowledge of foods, with new ideas about home furnishing, with practical methods of home sewing and millinery construction, and with such other information as tends to make rural home life attractive and satisfying.

For rural boys and girls, the Extension Service provides a valuable type of instruction in agriculture and home economics through its 4-H Club work. The instruction is incident to actual demonstrations conducted by the boys and girls themselves. These demonstrations, under supervision of the county and home demonstration agents, are the best possible means of imparting to youthful minds valuable information in crop and livestock production and in the household arts. The 4-H Club work, moreover, affords rural boys and girls a very real opportunity to develop the qualities of self-confidence, perseverance, and leadership.

The Extension Service works in accord with all other branches of the University of Maryland and with all agencies of the United States Department of Agriculture. It co-operates with all farm and community organizations in the State which have as their major object the improvement of agriculture and rural life; and it aids in every way possible in making effective the regulatory work and other measures instituted by the State Board of Agriculture.

COLLEGE OF ARTS AND SCIENCES

T. H. TALIAFERRO, *Dean*

The College of Arts and Sciences provides four years of liberal training in biological sciences, economics and business administration, history, languages and literature, mathematics, philosophy, physical sciences, political science, psychology, and sociology. It thus affords the student an opportunity to acquire a general education which shall serve as a foundation for success in whatever profession or vocation he may choose. It particularly prepares the ground and lays the foundation for the learned professions of law, medicine, theology, teaching, and even the more technical professions of engineering, public health service, and business administration. Through the aid which it furnishes other colleges of the University it aims to give students of these colleges the broad outlook necessary for liberal culture and for public service.

This College is an outgrowth of the Division of Language and Literature of the Maryland State College, and later of the School of Liberal Arts of the University. In 1921 the School of Liberal Arts and the School of Chemistry were combined and other physical and biological sciences were brought into the newly formed College of Arts and Sciences. Thus it was made a thoroughly standardized Arts and Sciences College.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are in general the same as those for admission to the other colleges and schools of the University. See section I, "Entrance."

For admission to the pre-medical and pre-dental curricula two years of any one foreign language in addition to the regularly prescribed units are required. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum will be found under the School of Medicine.

Departments

There are eleven university departments under the administrative control of the College of Arts and Sciences: Classical Languages, Chemistry, Economics and Sociology, English, History and Political Science, Mathematics, Modern Languages, Philosophy, Physics, Public Speaking, and Zoology and Aquiculture. In addition to these, there are other departments, which, although they are under the control of other colleges of the University, furnish instruction for the College of Arts and Sciences: Bacteriology, Botany, Entomology, Geology, Military Science, Physical Education,

and Psychology. Students in this college are also permitted to elect a limited number of courses in the Colleges of Agriculture, Education, Engineering, and Home Economics.

Degrees

The degrees conferred upon students who have met the prescribed conditions for degrees in the College of Arts and Sciences are Bachelor of Arts and Bachelor of Science.

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied all entrance requirements and has secured credit for a minimum of 127 credit hours, including six hours of military science for all able-bodied men students and six hours of physical education for all women students and such male students as are excused from military science, and one hour of library science for all students except those taking the special curricula in chemistry and the combined courses in which there are other requirements. Students who have received eight credits for military science or physical education are required to complete 129 credit hours for graduation.

Graduates of this college who have completed the regular course are awarded the degree of Bachelor of Arts, except that, upon request, any student who has met the requirements for that degree may be awarded the degree of Bachelor of Science, provided the major portion of the work has been done in the field of science and his application has the approval of the department in science in which the major work has been carried. Students who have elected the combined program of Arts and Medicine may be granted the degree of Bachelor of Arts or Bachelor of Science after the completion of at least three years of the work of this college and the first year of the School of Medicine. Those electing the combined five-year Academic and Nursing Course may be awarded the degree of Bachelor of Science upon the completion of the full course. Those taking the combined course in Arts and Law may be awarded the Bachelor of Arts degree after the completion of three years of the work of this college and one year of full-time law courses, or its equivalent, in the School of Law.

The last thirty hours of Arts courses in all the combined programs *must* be completed in residence at College Park. Likewise, the last thirty hours of the regular course leading to a degree *must* be taken in College Park.

Normal Load

The normal load for the Freshman year is sixteen hours a week for the first semester, including one hour of library science and one hour of military science or physical education, and seventeen hours for the second semester. The Sophomore load is seventeen hours per semester, two hours of which are military science or physical education.

The normal load for the Junior and Senior years is fifteen hours.

Absolute Maximum

Students whose average grade for the *preceding year* is a B average or above may, with the approval of the Dean, be permitted to take additional hours for credit; *but in no case shall the absolute maximum of 19 hours per week be exceeded.* In the majority of cases it is better for the student to put in four full years in meeting the requirements for a degree than to try to cover the course in a shorter period by taking additional hours.

Freshman-Sophomore Requirements

(a) Before the beginning of the Junior year the student not taking a special curriculum must have completed sixty credit hours in basic subjects and from three to five of these hours must be taken from each of six of the eight groups described below under major and minor requirements.

(b) Not more than twenty of these hours may be taken in one department.

(c) Freshmen and sophomores may not carry more than twelve hours in one group at a time.

<i>Freshman Program</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Composition and Rhetoric (Eng. 1y).....	3	3
*Foreign Language.....	3	5-3
Science (Biological or Physical).....	4	4
Reading and Speaking (P. S. 1 y).....	1	1
Basic R. O. T. C. (M. I. 1 y) or Physical Education (Phys. Ed. 1 y).....	1	1
Library Methods (L. S. 1 f).....	1	—
Freshman Lectures.....	—	—
Elect one of the following:		
**Elementary Social Sciences (Soc. Sci. 1 y).....	3	3
***Mathematics (Math. 1 f and 2 s).....		
Modern European History (H. 1 y).....		
History of England and Greater Britain (H. 3 y).....		
Elements of Literature (Eng. 2 y).....		
Total hours.....	16	17

Sophomore Year

The curriculum of the Sophomore year has been arranged on the basis of a wider election of courses than has heretofore prevailed, but the selection of these courses must be strictly within the limits set forth above under Freshman-Sophomore requirements.

- * Three hours throughout year only when entered in second year of language.
 ** Advisable for the advanced courses in Economics, Government, and Sociology.
 *** Prerequisite to Physics and necessary for students pursuing advanced courses in Chemistry.

Major and Minor Requirements

For the purpose of choosing major and minor fields of study, the courses of instruction open to students in the College are divided into eight groups. During this academic year minors only may be carried in Groups II and VII.

GROUPS

I. Biological Sciences	{ Botany Zoology Bacteriology Entomology
II. Classical Languages and Literatures	{ Latin Greek
III. English Language and Literature	{ English Language English Literature Public Speaking
VI. History and Social Sciences	{ Economics History Political Science Sociology
V. Mathematics	{ Pure Mathematics Applied Mathematics Astronomy
VI. Modern Languages and Literatures	{ French German Spanish
VII. Philosophy, Psychology, and Education	
VIII. Physical Sciences	{ Chemistry Geology Physics

(a) A major shall consist of not less than 20 and not more than 40 hours in a university department, and of not less than 30 and not more than 60 in the group including the major department.

(b) A minor shall consist of not less than 20 and of not more than 30 credit hours in a group related to the major group, not more than 25 of which shall be in any one department. Any hours taken in excess of this maximum in the minor group will not count as credit hours toward a de-

gree. The minor must have the favorable recommendation of the head of the major department.

(c) At the beginning of the Junior year each student (except those following prescribed curricula) must select a major in one of the groups and before graduation must complete one major and one minor. In certain exceptional cases two minors may be allowed, but in no case will any hours above the maximum of 30 in either minor be counted for credit toward a degree.

(d) The courses constituting a major must be chosen under the supervision of the faculty of the department in which the major work is done, and must include a substantial number of courses not open to freshmen and sophomores.

Specific Requirements for Graduation

Before graduation the following specific requirements must be completed by all students except those pursuing prescribed curricula.

- A. Military Science or Physical Education, 1y and 2y, six hours.
- B. Library Science, 1f, one hour.
- C. Group Requirements:
 - I. *English*—The required course in Composition and Rhetoric and two hours of Public Speaking. In addition at least a one-semester course must be taken in some form of advanced composition or in literature.
 - II. *Foreign Languages and Literatures*—If a student enters the University with but two units of language or less, he must pursue the study of foreign language for two years. If three or more units of foreign language are offered for entrance, he must continue the study of foreign language for one year. Students who offer two units of a foreign language for entrance, but whose preparation is not adequate for the second year of that language, receive only half credit for the first year's course.
 - III. *History and the Social Sciences*—At least twelve hours of history, economics, political science, or sociology, which shall include at least a year's course in history other than State history.
 - IV. *Mathematics and Natural Sciences*—A minimum requirement of eight hours of laboratory science with a minimum of eleven hours in this group.
 - V. *Education, Philosophy, and Psychology*—Six hours, with at least one course in Philosophy or Psychology.

Completion of Specific Requirements

It is strongly recommended that students complete as much of the above specific prescribed work by the end of the Sophomore year as can be taken without interfering with the general Freshman-Sophomore requirements. All of the specific requirements for graduation must be met before a student may be admitted to full Senior standing.

Junior-Senior Requirements

The work in the Junior and Senior years is elective within the limits set by the Major and Minor requirements and the completion of the Specific Requirements as outlined above.

Students With Advanced Standing

Students entering the Junior year of the College of Arts and Sciences with advanced standing from other universities or from other colleges of this university will be required to meet the requirements respecting studies of the first two years only to the extent of their deficiencies in credits in Arts and Science subjects for full Junior standing. Scholarship requirements as outlined in Section I of this catalogue will apply to all courses offered for advanced standing.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges of the University. The number of semester hours accepted from the various colleges is as follows.

- College of Agriculture—Fifteen.
- College of Education—Twenty.
- College of Engineering—Fifteen.
- College of Home Economics—Twenty.
- School of Law—Thirty in combined program.
- School of Medicine—Thirty in combined program.
- School of Nursing—Two years in combined program.

Student Responsibility

The individual student will be held responsible for the selection of the courses and the major in conformity with the preceding regulations.

Advisers

Each student may be assigned to a member of the faculty as his personal adviser, who will assist him in the selection of his courses, the arrangement of his schedule, and any other matters on which he may need assistance or advice. The faculty adviser acts in this capacity as assistant and representative of the Dean, who is charged with the execution of all of the foregoing rules and regulations.

SPECIAL CURRICULA

Special curricula are provided in Chemistry and Business Administration, and for the Pre-Medical, Pre-Dental, and Pre-Law courses. They are also provided for the combined programs in Arts and Nursing and Arts and Law.

CHEMISTRY

The Department of Chemistry includes the divisions of Inorganic, Organic, Analytical, Agricultural, Industrial, and Physical Chemistry, together with the State Control Work.

Courses in these several branches of the science are arranged with a view to the following:

- (1) Contributing toward the liberal education of the arts student;
- (2) Laying the scientific foundation necessary for the professions of medicine, dentistry, pharmacy, engineering, agriculture, etc.;
- (3) Offering training for the pursuit of chemistry as a career.

It should be noted that the chemical curricula hereinafter outlined are designed primarily to insure adequate instruction in the fundamentals of the science. At the same time it has been considered desirable to preserve as high a degree of flexibility as possible in order to afford the student who has a definite end in view an opportunity to fit his course to his actual needs. In general it may be said that the curricula offered prepare students to enter the following fields:

1. *Industrial Chemistry*—Curriculum II furnishes basic training, which, in conjunction with subsequent industrial experience or graduate work, should prepare the student to undertake plant control, plant management, or plant development work.

2. *Agricultural Chemistry*—Curriculum III may be adjusted, through the intelligent selection of electives, to fit the student for work in agricultural experiment stations, soil bureaus, geological surveys, food laboratories, industries engaged in the processing or handling of food products, and the fertilizer industries.

3. *General Chemistry*—Curriculum I offers a more liberal selection of science and arts subjects and, through co-operation with the College of Education, may be supplemented with the work in education necessary to obtain a State high-school teacher's certificate. To prepare for college teaching, graduate work leading to a higher degree is necessary.

4. *Chemical Research*—Preparation for research in chemistry is also based upon Curricula I, II, and III. It is advisable that elections be made largely from courses in chemistry and the allied sciences. Graduate work is essential (See Graduate School).

5. *State Control Laboratory*—The State Control Laboratory is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. The specific laws involved are the Feed Stuff

Law of Maryland, in effect June 1, 1920; The Fertilizer Law of Maryland, in effect June 1, 1922; and the Lime Inspection Law of Maryland, in effect June 1, 1912.

I. GENERAL CHEMISTRY

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
Modern Language (French or German).....	3	3
Mathematics (Math. 1f and 2s).....	3	3
General Chemistry (Chem. 1y).....	4	4
General Zoology (Zool. 1f).....	4	—
General Botany (Bot. 1s).....	—	4
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1 y).....	1	1
Freshman Lectures.....	18	18
<i>Sophomore Year</i>		
Qualitative Analysis (Chem. 2y).....	4	4
Arts Physics (Phys. 1y).....	4	4
Mathematics (Math. 5f and 6s).....	3	3
Modern Language (French or German).....	3	3
Advanced Composition and Rhetoric (Eng. 3f and 4s).....	2	2
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2 y).....	2	2
	18	18
<i>Junior Year</i>		
Quantitative Analysis (Chem. 6y).....	5	5
Physics Problems (Phys. 4y).....	1	1
Organic Chemistry (Chem. 8s).....	—	5
Principles of Economics (Econ. 3f).....	3	—
American History (H. 2y).....	3	3
General Bacteriology (Bact. 1f).....	3	—
Electives (Arts and Sciences or Education).....	2	3
	17	17
<i>Senior Year</i>		
Physical Chemistry (Chem. 102y).....	5	5
Advanced Organic Chemistry (Chem. 116y).....	4	4
Electives in Chemistry.....	4	4
Electives (Arts and Sciences or Education).....	4	4
	17	17

II. INDUSTRIAL CHEMISTRY

<i>Freshman Year</i>		<i>Semester</i>	
		<i>I</i>	<i>II</i>
Composition and Rhetoric (Eng. 1 y).....	3	3	
Modern Language (German or French).....	3	3	
Mathematics (Math. 3f and 4s).....	5	5	
General Chemistry (Chem. 1y).....	4	4	
Engineering Drafting (Dr. 1y).....	1	1	
Reading and Speaking (P. S. 1y).....	1	1	
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1	
Freshman Lectures	—	—	
	18	18	
<i>Sophomore Year</i>			
Mathematics (Math. 7y).....	5	5	
Engineering Physics (Phys. 2y).....	5	5	
Qualitative Analysis (Chem. 2y).....	4	4	
Modern Language (German or French).....	3	3	
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2	
	—	—	
	19	19	
<i>Junior Year</i>			
Advanced Composition and Rhetoric (Eng. 3f and 4s).....	2	2	
Quantitative Analysis (Chem. 6y).....	5	5	
Organic Chemistry (Chem. 8s).....	—	5	
Engineering Mechanics (Mech. 1f).....	4	—	
American History (H. 2y).....	3	3	
Principles of Economics (Econ. 3s).....	—	3	
General Bacteriology (Bact. 1f).....	3	—	
	—	—	
	17	18	
<i>Senior Year</i>			
Physical Chemistry (Chem. 102y).....	5	5	
Advanced Organic Chemistry (Chem. 116y).....	4	4	
Industrial Chemistry (Chem. 110y).....	3	3	
Advanced Physics (Phys. 103f).....	3	—	
Electives	2	5	
	—	—	
	17	17	

III. AGRICULTURAL CHEMISTRY

<i>Freshman Year</i>		<i>Semester</i>	
		<i>I</i>	<i>II</i>
Composition and Rhetoric (Eng. 1y).....	3	3	
Modern Language (French or German).....	3	3	
Mathematics (Math. 1f and 2s).....	3	3	
General Chemistry (Chem. 1y).....	4	4	
General Zoology (Zool. 1f).....	4	—	
General Botany (Bot. 1s).....	—	4	
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1	
Freshman Lectures	—	—	
	18	18	
<i>Sophomore Year</i>			
Arts Physics (Phys. 1y).....	4	4	
Mathematics (Math. 3f and 4s).....	3	3	
Modern Language (French or German).....	3	3	
Qualitative Analysis (Chem. 2y).....	4	4	
Advanced Composition and Rhetoric (Eng. 3f and 4s).....	2	2	
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2	
	—	—	
	18	18	
<i>Junior Year</i>			
Quantitative Analysis (Chem. 6y).....	5	5	
Physics Problems (Phys. 4y).....	1	1	
Plant Physiology (Plt. Phy. 1f).....	4	—	
Organic Chemistry (Chem. 8s).....	—	5	
General Bacteriology (Bact. 1y).....	3	3	
Principles of Economics (Econ. 3f).....	3	—	
Reading and Speaking (P. S. 1f.).....	1	—	
Electives	—	3	
	—	—	
	17	17	
<i>Senior Year</i>			
Physical Chemistry (Chem. 102y).....	5	5	
Advanced Organic Chemistry (Chem. 116y).....	4	4	
General Physiological Chemistry (Chem. 104f).....	4	—	
Chemistry of Nutrition (Chem. 108s).....	—	4	
Electives	4	4	
	—	—	
	17	17	

Co-operative Program in Chemistry

By the proper arrangement of the courses of study outlined above, students of high average ability can by utilizing their summers, take a four year course leading to a B. S. degree in Chemistry, and at the same time earn sufficient money to meet a part of their expenses during the last two years. This is made possible by securing employment as assistants in the Department of Chemistry and in certain industries in the State.

Since the co-operative program does not begin until after the completion of two and one half years of college work, most of the student's work in departments other than the chemistry department has been completed. On the other hand, if these non-technical courses have not been finished no real difficulty arises, for the shifts are made between semesters. It may be further noted that while a junior is studying, a senior is working, and vice versa. In this way the position is manned continuously, and each student gets one year of practical experience during his final years in college.

BUSINESS ADMINISTRATION

The aim of this curriculum is to afford those who propose to enter business as a career a training in the general principles of business. The work is based on the view that through a study of the best business methods there may be obtained valuable mental discipline and at the same time a knowledge of business technique that will make for a successful business career. Business demands today particularly men who are broadly trained, and not men narrowly drilled in routine. Hence, two years of liberal college training are very desirable for students intending to enter a business career. The curriculum provides for this broad cultural background as well as the special training in business subjects.

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
Foreign Language (German, French, or Spanish).....	3	3
Science (Chemistry, Zoology, or Botany).....	4	4
Elementary Social Sciences (Soc. Sci. 1y).....	3	3
Mathematics (Math. 1 f and 2 s).....	3	3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Library Methods (L. S. 1 f).....	1	—
Freshman Lectures	—	—
	18	17
<i>Sophomore Year</i>		
American History (H. 2y).....	3	3
Economic Geography and Industry (Econ. 1 f).....	3	—
History of World Commerce (Econ. 2 s).....	—	3

	Semester	
	I	II
Principles of Economics (Econ. 3 f).....	3	—
Economic Problems (Econ. 4 s).....	—	3
Business English (Eng. 17 f and 18 s).....	2	2
Elements of Psychology (Psych. 1 s).....	—	3
Reading and Speaking (P. S. 1y).....	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2
	3	—
*Electives	—	—
	17	17

Junior Year

General Accountancy (Econ. 109y).....	3	3
Business Organization and Operation (Econ. 105 f).....	2	—
Corporation Finance (Econ. 106 s).....	—	2
Business Law (Econ. 107 f and 108 s).....	3	3
Money and Credit (Econ. 101 f).....	2	—
Banking (Econ. 102 s).....	—	2
Mathematical Theory of Investment (Math. 101 f).....	3	—
Elements of Statistics (Math. 102 s).....	—	3
	2	2
*Electives	—	—
	15	15

Senior Year

Advanced Accountancy (Econ. 110y).....	3	3
Investments (Econ. 103 f).....	3	—
Life Insurance (Econ. 113 s) or Property Insurance (Econ. 114 s).....	—	2
	—	3
Foreign Trade (Econ. 116 s).....	—	—
Marketing Organization and Administration (Econ. 117 f and 118s)	3	3
Labor Problems (Soc. 102 f).....	2	—
	4	4
*Electives	—	—
	15	15

THE PRE-MEDICAL CURRICULUM

The minimum requirement for admission to the School of Medicine of the University of Maryland is 60 semester hours of prescribed courses, exclusive of military drill or physical education. The subjects and hours prescribed by the Council on Medical Education of the American Medical Association are covered in the first two years of the Pre-Medical Curriculum. In view of the fact, however, that about five times as many students, most of whom

* Electives must be chosen first to fulfill the Specific Requirements for Graduation; then from approved courses in the College of Arts and Sciences, Engineering, Education, or Agriculture.

have a baccalaureate degree, apply for admission to the School of Medicine of the University as can be accommodated, students are strongly urged to complete the full three-year curriculum before making application for entrance.

Preference will be given students requesting entrance to the School of Medicine of the University, who present the credits obtained by the successful completion of the three-year curriculum or its equivalent of 97 semester hours. To meet the recommendation of the Pre-Medical Committee a student must complete the curriculum with an average grade of "C" or above, and must otherwise satisfy the Committee that he is qualified by character and scholarship to enter the medical profession.

Another advantage the three-year curriculum offers over the minimum requirement of 60 hours is that the students successfully completing this program are awarded the degree of Bachelor of Arts or Bachelor of Science, on the recommendation of the Dean of the School of Medicine, after the completion of the first year's work in the Medical School. This combined program of seven years leads to the degree of Doctor of Medicine upon the completion of the full course. The first three years are taken in residence at College Park, and the last four in Baltimore in the School of Medicine. At least one year of residence at College Park is necessary for students transferring from other colleges and universities who wish to become candidates for the combined degrees. Only in exceptional cases will students who have been less than two years in residence at College Park be recommended for preference in admission to the School of Medicine.

For requirements for admission see Section I, "Entrance."

PRE-MEDICAL CURRICULUM

<i>Freshman Year</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Composition and Rhetoric (Eng. 1y).....	3	3
Mathematics (Math. 1 f and 2 s).....	3	3
General Zoology (Zool. 2 f and 3 s).....	4	4
General Chemistry (Chem. 1y).....	4	4
Reading and Speaking (P. S. 1y).....	1	1
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Library Methods (L. S. 1f).....	1	—
Freshman Lectures.....	—	—
	17	16

<i>Sophomore Year</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Arts Physics (Phys. 1y).....	4	4
*Organic Chemistry (Chem. 8 f)..... {	4	5
*Quantitative Analysis (Chem. 4 s)..... {	—	3
Elements of Psychology (Psych. 1 s).....	—	3
Comparative Vertebrate Morphology (Zool. 8 f).....	4	—
Modern Language (French or German).....	3	3
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2
	—	—
	17	17
<i>Junior Year</i>		
**Elementary Social Sciences (Soc. Sci. 1y).....	2	2
Advanced Composition and Rhetoric (Eng. 3 f and 4 s).....	2	2
Elementary Physical Chemistry (Chem. 10y).....	3	3
General Physiological Chemistry (Chem. 104 f).....	4	—
Embryology (Zool. 101 s).....	—	4
Electives	4	4
	—	—
	15	15

Senior Year

The curriculum of the first year of the School of Medicine. The students also may elect the fourth year's work from advanced courses offered in the College of Arts and Sciences.

PRE-DENTAL CURRICULUM

Students taking one year of work in the College of Arts and Sciences may be admitted to the second year of the five-year course of the School of Dentistry, provided the following program of studies has been followed:

<i>Freshman Year</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Composition and Rhetoric (Eng. 1y).....	3	3
General Zoology (Zool. 2 f and 3 s).....	4	4
Mathematics (Math. 1 f and 2 s).....	3	3
General Chemistry (Chem. 1y).....	4	4
Reading and Speaking (P. S. 1y).....	1	1
Library Methods (L. S. 1 f).....	1	—
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Freshman Lectures	—	—
	—	—
	17	16

If a second year of pre-dental education is completed in the College of Arts and Sciences, it should include the following courses: Arts Physics (Phys. 1y) and Organic Chemistry (Chem. 8 f or s). The balance of the program will be made up of approved electives.

* Quantitative Analysis may be given in the first semester and Organic Chemistry in the second semester.

** See page 175 regarding credit.

FIVE-YEAR COMBINED ARTS AND NURSING CURRICULUM

The first two years of this course are taken in the College of Arts and Sciences at College Park. If students enter this combined program with advanced standing, at least the second full year of the course must be completed in College Park.

The remaining three years are taken in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, Baltimore. The degree of Bachelor of Science and the Diploma in Nursing are granted at the end of the five-year course. Full details regarding this course may be found in the section of the catalogue dealing with the School of Nursing.

Two-Year Program in the College of Arts and Sciences

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
Foreign Language	3	3
General Chemistry (Chem. 1y).....	4	4
Elementary Social Sciences (Soc. Sci. 1y).....	3	3
Elementary Foods (H. E. 31y).....	3	3
Physical Education (Phys. Ed. 1y).....	1	1
Freshman Lectures	—	—
	17	17
<i>Sophomore Year</i>		
English Literature or History.....	3	3
Organic and Food Chemistry (Special Course).....	3	—
Nutrition (Special Course).....	—	3
Principles of Economics (Econ. 3 f).....	3	—
Elements of Psychology (Psych. 1 s).....	—	3
General Zoology (Zool. 1f).....	4	—
Reading and Speaking (P. S. 1y).....	1	1
Physical Education (Phys. Ed. 2y).....	2	2
Electives	1	5
	17	17

COMBINED PROGRAM IN ARTS AND LAW

Since September, 1927, the Law School of the University has required two years of academic credit for admission to the school, or sixty-seven semester hours of college credit.

The University offers a combined program in Arts and Law, leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at

College Park. During this period they will complete the prescribed curriculum in pre-legal studies as outlined below, and must complete the Specific Requirements for graduation as indicated elsewhere. If students enter the combined program with advanced standing, at least the third full year's work must be completed in residence at College Park.

Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded upon the completion of the combined program.

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
Science or Mathematics.....	4-3	4-3
History of England and Greater Britain (H. 3y).....	3	3
Elementary Social Sciences (Soc. Sci. 1y).....	3	3
Latin or Modern Language.....	4-3	4-3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Freshman Lectures	—	—
	16-18	16-18
<i>Sophomore Year</i>		
Expository Writing (Eng. 5 f and 6 s).....	2	2
Principles of Economics (Econ. 3 f).....	3	—
Economic Problems (Econ. 4 s).....	—	3
American History (H. 2y).....	3	3
Government of the United States (Pol. Sci. 2 f).....	3	—
Elements of Psychology (Psy. 1 s).....	—	3
Reading and Speaking (P. S. 1y).....	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2
*Electives	3	3
	17	17

Junior Year

Largely electives, including the completion of the Specific Requirements for Graduation as outlined on Page 84.

Senior Year

First year of regular law course.

Students who are unable to take the combined program in Arts and Law may fulfill the entrance requirements of the Law School by completing the first two years of pre-legal studies as outlined in the above combined course.

* Electives should be in English, History, Latin or Modern Languages, Economics or Political Science, or a part of the Specific Requirements for Graduation.

MISCELLANEOUS

LIBRARY SCIENCE

A course in Library Methods is required of all students registered in the College of Arts and Sciences.

This course is intended to help students use the library with greater facility. Instruction will be given by practical work with the various catalogues, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much used reference books, which the student will find helpful throughout his college course.

MUSIC

The Department of Music serves students of the University of two general classes: those who make a specialty of the subject with a view to becoming musical artists or music teachers, and those who pursue musical studies for purposes of enjoyment and general culture. For the former group extensive private instruction is provided, with attention to technical development along particular lines; while as large provision as possible is made for all in the various club activities and public lectures and recitals.

For courses in music see Section III, Courses of Instruction.

Voice

Courses in voice culture are offered, covering a thorough and comprehensive study of tone production, based on the Italian method of singing.

The work required to develop a singer is begun with the most fundamental principles of correct breathing. Scale and arpeggio exercises, all intervals, the portamento, legato, and staccato, the trill, and other embellishments to develop the technique of singing are studied through the medium of vocal exercises arranged by the greatest authorities on the voice, under the careful supervision of the instructor.

The study of songs and ballads is adapted to the ability and requirements of each singer, a thorough training in diction and phrasing being given through the medium of sacred and secular ballads, leading to the oratorio and opera.

Opportunities are afforded all voice pupils who are capable to make public appearances in the regular pupils' recitals, as well as in the churches of the community.

Tuition

One lesson per week, term of eighteen weeks, \$24.

The above price for lessons in voice is offered to students of the University who are pursuing regular academic courses. Terms for private instruction outside the University may be secured from the instructor in voice.

Piano

Elementary piano courses. Work for beginners, based on the Leschetizky method.

Advanced piano courses. The college work in piano presupposes three years of preparatory study of the piano, part or all of which may be taken at the University.

Lessons are taken twice a week. A four-year college course is as follows:

First Year—Technical studies based on the modern weight and rotary method: Heller Etudes, Sonatas of Haydn, Mozart, and Beethoven; selections from classic and modern composers.

Second Year—Bach Preludes; concertos by classic masters; Jensen Etudes; selections from classic, romantic, and modern composers.

Third Year—Leschetizky technic; Chopin Preludes and Waltzes; Bach Inventions; Mendelssohn Concertos; Beethoven Sonatas; selections from romantic and modern composers.

Fourth Year—Leschetizky technic; Chopin Etudes; Bach Well-Tempered Clavichord; sonatas and concertos by Greig, McDowell, Schutt, Beethoven, etc.; concert pieces by modern and romantic composers.

Tuition

One lesson per week, term of eighteen weeks, \$24.

Note.—Music tuitions are due in advance. Ten per cent. is added to all tuitions not paid in advance.

COLLEGE OF EDUCATION

WILLARD S. SMALL, *Dean*.

The College of Education was established in 1920. It was organized to meet the needs of the following classes of students: (1) undergraduate students preparing to teach the cultural and the vocational studies in the high schools; (2) advanced students preparing to become high school principals, elementary school principals, educational supervisors, and school administrators; (3) those preparing for educational work in the trades and industries; (4) county agents, home demonstrators, boys and girls club leaders and other extension workers; (5) students majoring in other lines who desire courses in education for their informational and cultural values.

The Summer School, although organically distinct from the College of Education, is administered by the Dean of the College of Education, and is in effect an administrative division of the College.

Departments

The instructional work of the College of Education is conducted by five functional divisions or departments: History and Principles of Education, Methods in Academic and Scientific Subjects, Agricultural Education, Home Economics Education, and Industrial Education.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. See Section I, "Entrance."

For additional requirements for admission to the curricula in Agricultural Education and Home Economics Education, see page 104 and page 105, respectively.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are: Bachelor of Arts; Bachelor of Science. Upon completion of 128 credits in conformity with the requirements specified under "curricula" and in conformity with general requirements of the University, the appropriate degree will be conferred.

Teachers' Special Diploma

The degrees granted for work done in the College of Education indicate primarily the quantity of work completed. The Teachers' Special Diploma certifies to the professional character of such work. Teachers' special diplomas will be granted only to those who, besides qualifying for a degree,

give promise of superior professional ability as evidenced by their personality, character, experience, and success in supervised teaching.

Teachers' special diplomas are granted in the Biological Sciences, Chemistry, English, French, General High School Science, History and Social Sciences, Mathematics and Physics, Vocational Agriculture, Vocational Home Economics, and Industrial Education.

The recipient of the teachers' special diploma is eligible for certification by the State Superintendent of Schools without examination.

Facilities

In addition to the general facilities offered by the University, certain important supplementary facilities are available.

Supervised Teaching. Actual experience in teaching under competent supervision is of basic importance in the preparation of teachers. Since 1920 a co-operative arrangement with the Prince George's County School authorities has been in effect whereby students preparing to teach get this experience in the Hyattsville High School under instructors employed and paid jointly by the County School Board and the University.

Observation. The observation work necessary for efficient teacher training is conducted in Washington and in nearby Maryland schools.

The nearness of these schools and of the federal offices and libraries in Washington dealing with education provides unusual opportunities for contact with actual classroom situations and current administrative problems in education.

Curricula

The departments of the College of Education fall into two main groups: General Education and Vocational Education. Two types of curricula are offered corresponding with these two major groupings.

General Education. The first of these is designed to prepare teachers of the academic and scientific subjects in high schools. The basic requirements are fixed and definite, but the student may select from a number of subjects the major and minor subjects in which he expects to qualify for teaching. The student may qualify for the degree either of Bachelor of Arts or of Bachelor of Science, depending upon his election of major subject.

The requirements for majors and minors correspond in general with the requirements of the College of Arts and Sciences, but are modified in some respects to adapt them better to the needs of prospective teachers and to satisfy the regulations of the State Department of Education in regard to "the number of college credits required in any two or more subjects which are to be placed on a high school teachers' certificate."

Some of the most common combinations of academic subjects in the high schools of the State are: English and History; English and French; History and French; Mathematics and one or more of the high school Sciences.

Vocational Education. The curricula in Vocational Education are designed for the definite purpose of preparing teachers of agriculture, home economics, manual training, and industrial subjects. As the University of Maryland is the institution designated by the State Board of Education for the training of teachers of vocational agriculture, home economics, and trades and industries under the provisions of the Smith-Hughes Vocational Educational Act, the curricula in this class have been organized to meet the objectives set up in the act and in the interpretations of the Federal Board of Vocational Education and the State Board of Education. These curricula lead to the degree of Bachelor of Science.

Guidance in Registration

All students wishing to prepare for teaching should consult the Dean of the College of Education regarding possible combinations and the arrangement of their work. At the time of matriculation each student is expected to make a provisional choice of the subjects which he desires to prepare to teach and to secure the advice and approval of the heads of departments which offer these subjects.

It is advisable for students who purpose to teach to register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation. It is permissible, however, for a student to register in that college which in conjunction with the College of Education offers the majority of the courses he will pursue in satisfying the requirements of the curriculum he elects.

The Teachers' Special Diploma will be awarded only to the student who shall have fulfilled all of the requirements of the curriculum he elects. Students in other colleges desiring to qualify for the Teachers' Special Diploma should consult with the Dean of the College of Education at the beginning of the sophomore year in order to plan satisfactorily their subsequent programs. Adjustments may be made as late as the beginning of the Junior year. *It is practically impossible to make adjustments later than that. This is due to the sequence of professional subjects in the junior and senior years.*

Professional Requirements

As an integral part of every curriculum of the College of Education leading to a degree, a minimum of 20 credits in Education is required.

The special requirements peculiar to each curriculum in the College of Education are shown in the tabular statements of the curricula for Arts and Science Education, Agricultural Education, and Home Economics Education.

Certification of High School Teachers

The State Board of Education will certify to teach in the approved high schools of the State only such persons as have had satisfactory professional preparation.

The State Department of Education is stimulating and encouraging instruction in music and athletics in the high schools of the State. In the majority of these schools the instruction in these subjects will have to be carried on by teachers who teach other subjects as well. Training in either or both of these subjects will be valuable for prospective teachers.

ARTS AND SCIENCE EDUCATION

Students electing this curriculum may register either in the College of Education or the College of Arts and Sciences. In any case they will register with the College of Education for the teachers' special diploma.

The Teachers' Special Diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

General Requirements

In addition to Military Science or Physical Education, required of all students in the University, the following requirements must be fulfilled by all candidates for degrees in this curriculum, preferably by the end of the sophomore year:

- (1) Composition and Rhetoric (Eng. 1y), 6 semester hours, and in addition not less than 4 semester hours in English Language or Literature.
- (2) Reading and Speaking (P. S. 1y), 2 semester hours.
- (3) Two years of foreign language if the student enters with less than three years of foreign language; one year, if he enters with three or more years.
- (4) Nine semester hours of history and the social sciences, of which six must be history.
- (5) Eleven hours of natural science or of natural science and mathematics, of which eight semester hours must be in laboratory science and must include General Zoology (Zool. 1 f or s).

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
Educational Guidance (Ed. 1y).....	1	1
Reading and Speaking (P. S. 1y).....	1	1
R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y).....	1	1
*Foreign Language	3	3-5
Science (Biological or Physical).....	4	4
(One of the following.)		
Modern European History (H. 1y).....	3	3
Elementary Social Sciences (Soc. Sci. 1y).....	3	3
Elements of Literature (Eng. 2y).....	3	3
Mathematics (Math. 1y).....	3	3
	—	—
	16	16-18

* Three hours throughout the year only when entered in second year of language.

		Semester	
		I	II
<i>Sophomore Year</i>			
Public Education in the United States (Ed. 2f).....	2	—	
Educational Hygiene (Ed. 3s).....	—		2
Basic R. O. T. C. (M. I. 2y), or Physical Education (Phys. Ed. 2y)	2		2
*Foreign Language.....	3		3
†Electives	10-11	10-11	
	—	—	
	17-18	17-18	
<i>Junior Year</i>			
Educational Psychology (Ed. 101f).....	3	—	
Technic of Teaching (Ed. 102s).....	—		3
†Electives	13	13	
	—	—	
	16	16	
<i>Senior Year</i>			
Special Methods and Supervised Teaching (Ed. 110, 111, 112, 113, 114)	3		3
Principles of Secondary Education (Ed. 103s).....	—		3
†Electives	12		9
	—	—	
	14	14	

Special Requirements

The semester hour requirements detailed below for each of the subjects cover all of the requirements of the State Board of Education (By-law 51) in regard to the number of college credits in any two or more subjects which are to be placed on the high school teacher's certificate.

No student will be permitted to do practice teaching who has not met all previous requirements.

English. For a major in English 36 semester hours are required as follows:

Composition and Rhetoric.....	6 semester hours
Advanced Composition and Rhetoric.....	4 semester hours
Reading and Speaking.....	2 semester hours
Literature	18 semester hours
Electives	6 semester hours

Total..... 36

For a minor in English 24 semester hours are required:

Composition and Rhetoric.....	6 semester hours
Advanced Composition and Rhetoric.....	4 semester hours
Reading and Speaking.....	2 semester hours
Literature	12 semester hours

Total..... 24

* For students entering with less than three units in foreign language.

† Determined by "general requirements" and choice of major and minor subjects.

All students with a major or minor in English must complete English 1y, Public Speaking 1y, Advanced Composition and Rhetoric, and History of English Literature by the end of the junior year.

Additional courses required in the major group are The Drama or Shakespeare and 6 hours from the following: The Novel, English and American Essays, Modern Poets, Victorian Poets, Poetry of Romantic Age, American Literature, and Comparative Literature.

History and Social Sciences. For a major in this group 30 semester hours are required as follows:

History	18 semester hours
Economics or Sociology.....	6 semester hours
*Electives	6 semester hours

All students with a major or minor in the Social Studies must complete Modern European History and American History by the end of the junior year.

Modern Languages. French is the only modern language for which supervised teaching is available. For a major in Modern Languages, 30 semester hours are required if the major is confined to one language; if two languages are included in the major, 42 semester hours†. A minor requires 24 semester hours if confined to one language; 30 semester hours if two languages are included. If both major and minor are taken in modern language the major requires 30, and the minor, 24 semester hours.

All students with a major or minor in Modern Language must complete the following courses by the end of the junior year: French 1y; French 2s; French 3y; French 8f; French 9s. French 105f and French 106s are also prescribed courses; they may be taken in either the junior or the senior year. The electives in French necessary to complete the major must be selected from the following: French 6f; French 7s; French 101f; French 102s; French 103f; French 104s.

Mathematics. For a major in Mathematics 30 semester hours are required. Twenty semester hours including College Algebra, Trigonometry, Analytics, and Calculus must be completed by the end of the junior year. Additional courses to make up the remaining 10 semester hours will be chosen from those listed on page 000 for advanced undergraduates and graduates.

For a minor in Mathematics, 20 semester hours are required.

Sciences. Both majors and minors are offered in Chemistry, Physics, and the Biological Sciences. The minimum requirement for a major is 30 semester hours; for a minor, 20 semester hours. In case of a major, not less than 20 semester hours must be completed by the end of the junior year.

* For a minor, the same requirements, less electives.

† If the major includes two languages, at least 30 semester hours must be in French, unless the student entered with two years of high school French. In that case, the French requirement is 22 semester hours and the combined requirement is 34 semester hours. A similar adjustment is made in case of the minor.

In satisfaction of the regulation of the State Department of Education for certification in General High School Science, a major and a minor are offered, consisting of a combination of Chemistry, Physics, and the Biological Sciences. For a major, a minimum of 34 semester hours is required, which shall include the elementary courses in Chemistry, Physics, and Biology (Zoology and Botany), and ten additional hours elected from any of the three sciences. For a minor, the requirements are 24 semester hours consisting of the elementary courses required for the major.

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

The electives allowed by this curriculum may be selected from any of the courses offered by the University for which the student has the necessary prerequisites. A student is expected, however, to confine his elections to subjects relating to farming and to teaching. Though a certain amount of specialization in a particular field of agriculture such as animal husbandry, agronomy, pomology, vegetable gardening, agricultural economics, or farm management, is encouraged, students should so arrange their work that approximately forty per cent. of their time will have been spent on technical agriculture, twenty-five per cent. on scientific subjects, twenty per cent. on subjects of a general educational character, and from twelve to fifteen per cent. on subjects in professional education.

Students electing this curriculum may register either in the College of Education or in the College of Agriculture. In either case they will register with the College of Education for the teachers' special diploma. The teachers' special diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

<i>Freshman Year</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Educational Guidance (Ed. 1y).....	1	1
General Animal Husbandry (A. H. 1 f).....	3	—
Principles of Vegetable Culture (Hort. 11 s).....	—	3
General Chemistry (Chem. 1-A y or 1-B y).....	4	4
General Botany (Bot. 1 f).....	4	—
General Zoology (Zool. 1 s).....	—	4
Composition and Rhetoric (Eng. 1y).....	3	3
Basic R. O. T. C. (M. I. 1y).....	1	1
	—	—
	16	16

<i>Sophomore Year</i>	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Public Education in the United States (Ed. 2 f).....	2	—
Diseases of Plants (Plt. Path. 1 f).....	3	—
General Entomology (Ent. 1 s).....	—	3
Field Crop Production (Agron 1 f and 2 s).....	3	3
Geology (Geol. 1 f).....	3	—
Principles of Soil Management (Soils 1 s).....	—	3
Feeds and Feeding (A. H. 2 f).....	3	—
Farm Dairying (D. H. 1 s).....	—	3
Elementary Pomology (Hort. 1 f).....	3	—
Principles of Economics (Econ. 3 s).....	—	3
Basic R. O. T. C. (M. I. 2y).....	2	2
	—	—
	19	17

<i>Junior Year</i>		
Educational Psychology (Ed. 101 f).....	3	—
Survey of Teaching Methods (Ag. Ed. 100 s).....	—	3
Public Speaking (Courses to be arranged).....	2	2
Farm Machinery (F. Mech. 101 f).....	3	—
Poultry (Poultry 101 s).....	—	3
Genetics (Gen. 101 f).....	3	—
Grain and Hay Judging (Agron. 4 f).....	1	—
Advanced Dairy Cattle Judging (D. H. 3 s).....	—	1
Bacteriology (Bact. 1 s).....	—	3
Agricultural Economics (A. E. 1 f).....	3	—
Marketing Farm Products (A. E. 102 s).....	—	3
Electives	2	2
	—	—
	17	17

<i>Senior Year</i>		
Teaching Secondary Vocational Agriculture (Ag. Ed. 101 y).....	4	4
Rural Life and Education (Ag. Ed. 102 s).....	—	3
Farm Shop (F. Mech. 104 f).....	1	—
Teaching Farm Shop in Secondary Schools (Ag. Ed. 104 s).....	—	1
Principles of Secondary Education (Ed. 103 s).....	—	3
Farm Management (F. M. 2 f).....	4	—
The Novel (Eng. 122 f and 123 s).....	2	2
Electives	3	3
	—	—
	14	16

HOME ECONOMICS EDUCATION

The Home Economics Education curriculum is for those students who wish to teach vocational home economics, to do home demonstration work,

or to engage in other types of home economics in which teaching may be involved.

This is a general course including work in all phases of home economics—foods, clothing, child care—with professional training for teaching these subjects. Electives may be chosen from other colleges.

Opportunity for additional training and practice is given through directed teaching: practice house; and special work and observation of children at the Washington Child Research Center.

The Teachers' Special Diploma will be awarded only to those who have fulfilled all requirements of this curriculum.

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1y).....	3	3
General Chemistry (Chem. 1y).....	4	4
Educational Guidance (Ed. 1y).....	1	1
Clothing Construction (H. E. 12 f).....	3	—
Principles of Design (H. E. 21 s).....	—	3
Physical Education (Phys. Ed. 1y).....	1	1
Electives	3	3
	—	—
	15	15
<i>Sophomore Year</i>		
Elements of Organic Chemistry (Chem. 12 f).....	4	—
*Special Applications of Physics (Phys. 3 s).....	—	4
Elementary Foods (H. E. 31y).....	3	3
Textile Fabrics (H. E. 11 f).....	3	—
Costume Design (H. E. 24 s).....	—	3
Public Education in the United States (Ed. 2 f).....	2	—
Physical Education (Phys. Ed. 2y).....	2	2
Electives	3	5
	—	—
	17	17
<i>Junior Year</i>		
Educational Psychology (Ed. 101 f).....	3	—
Technic of Teaching (H. E. Ed. 100 s).....	—	3
Household Bacteriology (Bact. 3 s).....	—	3
Nutrition (H. E. 131 f and 132 s).....	3	3
Buying for the Home (H. E. 142 f).....	2	—
Advanced Clothing (H. E. 111 f).....	4	—
Education of Women (H. E. Ed. 101 s).....	—	3
**Electives	5	5
	—	—
	17	17

* For students who have not had High School Physics.

** Choice of General Zoology, General Botany, or Genetics required for all students in the Sophomore or Junior Year.

	Semester	
	I	II
<i>Senior Year</i>		
Child Study (H. E. Ed. 102 f).....	5	—
Management of the Home (H. E. 141 f).....	5	—
Teaching Vocational Home Economics; Methods and Practice (H. E. Ed. 103 f).....	5	—
Interior Decoration (H. E. 121 s).....	—	3
Principles of Secondary Education (Ed. 103 s).....	—	3
Electives	—	9
	—	—
	15	15

INDUSTRIAL EDUCATION

Three types of curricula are offered in Industrial Education; viz., a four-year curriculum, a two-year curriculum, and a special curriculum.

Four-Year Curriculum in Industrial Education

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the four-year curriculum in industrial education must be willing to engage in the trades or industries during the three summer vacations, if they have not had an equivalent experience in industry.

The electives allowed by this curriculum may be chosen from any of the courses offered in the University for which the student has the necessary prerequisites.

Two-Year Curriculum in Industrial Education

This curriculum is designed for mature students who have had experience in some trade or industry or in the teaching of shopwork.

Applicants for admission to this curriculum must have as a minimum requirement an elementary school education or its equivalent. The curriculum is prescribed, but it is administered flexibly in order that it may be adjusted to the needs of students.

At the completion of the curriculum a diploma is granted.

Special Courses for Teachers of Trades and Related Subjects

To meet the needs for industrial teacher-training in Baltimore and in other industrial centers, extension courses are offered. The work of these courses deals with the analysis and classification of trade knowledge for instructional purposes, methods of teaching, observation and practice of teaching, organization and management of trade and industrial classes, psychology of trade and industrial education, tests and measurements, history of the development

of industrial education, and occupational information, guidance, and placement.

The completion of eight teacher-training courses, which requires, in general, two years or two hundred and fifty-six clock hours, will entitle a student to a full three year vocational teacher's certificate in the State of Maryland, and to a special diploma from the College of Education of the University of Maryland.

A special announcement of the extension courses will be issued in September, 1929, and may be obtained from the office of the Registrar either in Baltimore or in College Park.

COLLEGE OF ENGINEERING

A. N. JOHNSON, *Dean*

Whether a man follows engineering as his life's work or enters other fields, it is well recognized that the training received in the engineering colleges of today affords a splendid preparation for many callings in public and private life outside of the engineering profession.

The College of Engineering includes the Departments of Civil, Electrical, and Mechanical Engineering. A few years ago the curricula were considerably changed, the general purpose being to broaden the courses of instruction that young men may be better prepared to enter industry or the public service. In either field there is abundant opportunity; each demands the electrical and mechanical, as well as the civil engineer. Maryland needs men to carry on her great highway work and large public undertakings, as well as to carry on her industries. Such training, therefore, seems pre-eminently a function of the State's University.

The subject matter of the courses is not essentially different from that usually given. In order to give the time necessary to the technical subjects, as well as to those of a more general character, courses of study are prescribed so that the time in each semester may be used to the best advantage.

The studies prescribed for freshmen and sophomores are practically the same for all branches of engineering. Among other advantages that such a plan has is the very important one that the young man will not be called upon to decide definitely the branch of engineering in which he will specialize until his junior year.

Engineering research is recognized today as one of the most needed useful contributions that the engineering college can make to the State. Work of this character is under way at the University of Maryland, where, through co-operation with the Maryland State Roads Commission and the U. S. Bureau of Public Roads, highway research problems are being studied, the solution of which will prove of utmost value to the people of the State. It is planned to develop as rapidly as possible this phase of the work, which will have, aside from its great economic value to the State, an important educational value because of the close contact the students will have with the live engineering problems of today.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere described for admission to the under-graduate departments of the University, except as to the requirements in mathematics. See Section I, "Entrance."

It is possible, however, for high school graduates having the requisite number of entrance units to enter the Engineering College without the unit

for advanced algebra, or the one-half unit for solid geometry, provided such students are prepared to devote their first summer to a summer course in analytic geometry. The program for such students would be as follows: During the first semester five hours a week would be devoted to making up advanced algebra and solid geometry; in the second semester, the mathematics of the first semester would be taken, and the second semester mathematics would be taken in the summer school. Thus, such students, if they passed successfully, would be enabled to enter the sophomore year the next fall.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in Civil, Electrical, and Mechanical Engineering, respectively.

Master of Science in Engineering

The degree of Master of Science in Engineering is given to those students registered in the Graduate School, who hold bachelor degrees in engineering, prerequisite for which requires a similar amount of preparation and work as required for bachelor degrees in the Engineering College of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School, as will be found explained in the catalogue under the head of Graduate School.

Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than three years.
2. His registration for a degree must be approved at least twelve months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.
3. He shall present a satisfactory thesis on an approved subject.
4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Equipment

The Engineering building is provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for all phases of engineering work.

Drafting-Rooms. The drafting-rooms are equipped for practical work. Engineering students must provide themselves with an approved drawing outfit, material, and books, the cost of which during the freshman year amounts to about \$40.00.

Electrical Engineering Laboratory. The equipment includes many of the various types of direct current and alternating current generators and motors, rotary converter, distribution transformers, control apparatus, and the measuring instruments essential to practical electrical testing. For experimental work, electrical power is obtained from engine driven units and a turbine generator; a storage battery is used for constant voltage-testing purposes.

Instruments are available for measuring the candle power of lamps and for the determination of illumination intensities. The standardizing laboratory apparatus includes primary and secondary standards used in calibrating laboratory instruments.

The telephone laboratory is equipped with apparatus for experimental work on magneto and common battery system. The radio apparatus is limited, at present, to receiving sets.

Mechanical Engineering Laboratory. The apparatus consists of Corliss and plain slide valve engines, steam turbine set, fans, pumps, indicators, gauges, feed water heaters, tachometers, injectors, flow meters, apparatus for determination of the B. T. U. in coal, gas, and liquid fuels, pyrometers, draft gauges, planimeters, thermometers, and other necessary apparatus and equipment for a mechanical laboratory.

Materials Laboratory. Apparatus and equipment are provided for making standard tests on various construction materials as steel, concrete, timber, and brick.

Equipment includes two 100,000-pound universal testing machines, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also made available for student work.

Highway Research Laboratory. Certain problems in highway research have been undertaken and are actively under way, being carried on in co-operation with the State Roads Commission and the U. S. Bureau of Public Roads.

A study of the traffic over the Maryland State Highway system has been in progress, and there has already been prepared a traffic map covering the entire state highway system.

The elastic properties of concrete have been studied in the laboratory, this work co-ordinating with the general program of research problems undertaken by the U. S. Bureau of Public Roads.

In co-operation with the State Roads Commission, there are taken every other year samples of concrete from the concrete roads of the State, these samples consisting of cores cut from the road by a special core drill apparatus mounted upon a suitably equipped truck. The cores are brought into the laboratory, where they are tested and records of the results sent to the State Roads Commission.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided for engineering students.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, and drill presses.

The foundry is provided with an iron cupola, a brass furnace, and coke oven.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane, typographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of types of instruments is provided, including domestic as well as foreign makes.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available for students in this branch of engineering.

There has also been collected a wide variety of specimens of the more common minerals and rocks from various sections of the country, particularly from Maryland.

Library

Each department contains a well-selected library for reference, and the standard engineering magazines.

The class work, particularly in the higher courses, requires that the students consult special books of reference and current technical literature.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are also expected to attend and take part in the meetings of the Engineering Society, Seminar, and engineering lectures.

Junior and senior students with requisite standing may elect additional hours not to exceed three hours a semester.

All members of the freshman engineering class are required to attend a series of lectures, the speakers, for the most part, being other than engineers. Each student is required to hand in a very brief written summary of each lecture.

In addition to the requirements of the regular curricula, all students in the Engineering College are required, during each of the three summer vacations, to obtain employment in some line of commercial work, preferably that which relates to engineering. Unless the student can offer some adequate reason why he has not been so employed during at least two months of each of his summer vacation periods, it may be considered sufficient cause for withholding his degree.

The proximity of the University to Baltimore and Washington, and to other places where there are great industrial enterprises, offers an excellent opportunity for engineering students to observe what is being done in this chosen field. An instructor accompanies students on all trips of inspection.

The same program is required of all students in engineering in the Freshman and Sophomore years.

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1 y).....	3	3
*Elementary Social Sciences (Soc. Sci. 1 y).....	3	3
*Modern Language	3	3
Reading and Speaking (P. S. 1 y).....	1	1
Freshman Mathematics (Math. 3 f and 4 s).....	5	5
General Chemistry (Chem. 1 y).....	4	4
Engineering Drafting (Dr. 1 y).....	1	1
Shop and Forge Practice (Shop. 1 y).....	1	1
Basic R. O. T. C. (M. I. 1 y).....	1	1
Engineering Lectures	—	—
	19	19
<i>Sophomore Year</i>		
Oral Technical English (P. S. 3 y).....	1	1
*Modern Language (Adv. Course).....	3	3
*Modern European History (H. 1 y).....	3	3
Calculus; Elementary Differential Equations (Math. 7 y).....	5	5
Physics (Phys. 2 y).....	5	5
Descriptive Geometry (Dr. 2 y).....	2	2
Machine Shop Practice (Shop 2 f and 3 s) M. and E.	1	2
Civil.....	1	—
	2	2
Basic R. O. T. C. (M. I. 2 y).....	1	—
Plane Surveying (Surv. 1 f and 2 s) M. and E.	1	2
Civil.....	1	—
	—	—
Engineering Lectures	—	—
	18	18

* Alternatives.

CIVIL ENGINEERING

	Semester	
	I	II
<i>Junior Year</i>		
*Principles of Economics (Econ. 3 f).....	3	—
*Advanced Oral Technical English (P. S. 4 y).....	1	1
*Engineering Geology (Engr. 2 y).....	1	1
*Engineering Mechanics (Mech. 2 y).....	5	4
*Prime Movers (Engr. 1 y).....	2	2
Design of Structures, Elements of (C. E. 102 s).....	—	5
*Materials of Engineering (Mech. 3 s).....	—	2
Advanced Surveying (Surv. 101 f).....	3	—
Railroads, Elements of (C. E. 101 f).....	3	—
*Railway Transportation (Econ. 111 s).....	—	3
Engineering Lectures.....	—	—
	18	18

<i>Senior Year</i>		
*Advanced Oral Technical English (P. S. 5y).....	1	1
*Engineering Jurisprudence (Engr. 101 f).....	1	—
*Public Utilities (Engr. 3 s).....	—	1
*Engineering Chemistry (Chem. 111 f).....	1	—
Sanitary Bacteriology (Bact. 4 s).....	—	1
Highways, (C. E. 106 f).....	4	—
Bridges, Masonry and Steel (C. E. 105 y).....	4	4
Buildings, Masonry and Steel (C. E. 104 y).....	4	4
Sanitation (C. E. 107 y).....	3	3
Thesis (C. E. 108 s).....	—	4
Engineering Lectures.....	—	—
	18	18

ELECTRICAL ENGINEERING

<i>Junior Year</i>		
*Principles of Economics (Econ. 3 f).....	3	—
*Railway Transportation (Econ. 111 s).....	—	3
*Advanced Oral Technical English (P. S. 4 y).....	1	1
*Engineering Geology (Engr. 2 y).....	1	1
*Engineering Mechanics (Mech. 1 y).....	4	3
*Materials of Engineering (Mech. 3 s).....	—	2
Elements of Machine Design (M. E. 101 f).....	1	—
Direct Currents (E. E. 102 y).....	5	5
*Prime Movers (Engr. 1 y).....	2	2
Electrical Machine Design (E. E. 103 y).....	1	1
Engineering Lectures.....	—	—
	18	18

* Required of all engineering students.

	Semester	
	I	II
<i>Senior Year</i>		
*Advanced Oral Technical English (P. S. 5 y).....	1	1
*Engineering Jurisprudence (Engr. 101 f).....	1	—
*Public Utilities (Engr. 3 s).....	—	1
*Engineering Chemistry (Chem. 111y).....	1	1
Alternating Currents (E. E. 104 y).....	5	5
Electrical Machine Design (E. E. 105 y).....	1	2
†Electric Railways and Electric Power Transmission (E. E. 106 y).....	3	4
†Telephones and Telegraphs (E. E. 107 y).....	3	4
†Radio Telephony and Telegraphy (E. E. 108 y).....	3	4
†Illumination (E. E. 109 y).....	3	—
Thermodynamics (Mech. 101 f).....	3	—
Engineering Lectures.....	—	—
	18	18

MECHANICAL ENGINEERING

<i>Junior Year</i>		
*Principles of Economics (Econ. 3 f).....	3	—
Railway Transportation (Econ. 111 s).....	—	3
*Advanced Oral Technical English (P. S. 4 y).....	1	1
*Engineering Geology (Engr. 2 y).....	1	1
*Engineering Mechanics (Mech. 1 y).....	4	3
*Engineering Mechanics (Mech. 1 y).....	—	2
*Materials of Engineering (Mech. 3 s).....	—	2
Foundry Practice (Shop 4 f).....	1	—
*Prime Movers (Engr. 1 y).....	2	2
Kinematics and Machine Design (M. E. 102 y).....	6	2
Elements of Steel Design (C. E. 103 s).....	—	2
Heating and Ventilation (M. E. 108 s).....	—	2
Engineering Lectures.....	—	—
	18	18

<i>Senior Year</i>		
*Advanced Oral Technical English (P. S. 5 y).....	1	1
*Engineering Jurisprudence (Engr. 101 f).....	1	—
*Public Utilities (Engr. 3 s).....	—	1
*Engineering Chemistry (Chem. 111 y).....	1	1
Design of Prime Movers (M. E. 103 y).....	3	3
Design of Power Plants (M. E. 104 s).....	—	3
Design of Pumping Machinery (M. E. 105 f).....	2	—

* Required of all engineering students.

† Select two.

	<i>Semester</i>	
	<i>I</i>	<i>II</i>
Thermodynamics (Mech. 102 y).....	3	3
Physical Chemistry (Chem. 10 y).....	3	3
Engineering Finance (M. E. 106 s).....	—	2
Mechanical Laboratory (M. E. 107 y).....	1	1
Industrial Application of Electricity (E. E. 101 f).....	3	—
Engineering Lectures.....	—	—
	18	18

COLLEGE OF HOME ECONOMICS

M. MARIE MOUNT, *Dean*

The home economics subjects are planned to meet the needs of the following classes of students: (1) those who desire a general knowledge of the facts and principles of Home Economics without specializing in any one phase of Home Economics; (2) those students who wish to teach Home Economics in schools or to become Extension Specialists in Home Economics; (3) those who are interested in certain phases of Home Economics with the intention of becoming dietitians, restaurant and cafeteria managers, textile specialists, clothing designers, buyers of clothing in department stores, demonstrators for commercial firms, and specialists in other similar positions.

Departments

For administrative purposes the College of Home Economics is organized into the Departments of Foods and Nutrition, Textiles, Clothing, and Art, and Home and Institutional Management.

Equipment

In addition to the usual classroom and laboratory facilities, the college maintains a well-equipped home management house, in which the students will keep house for a period of six weeks during either their junior or senior year.

Degree

The degree of Bachelor of Science is conferred for the satisfactory completion of four years of prescribed courses, of 128 semester hours. In accordance with the University policy, not less than three-fourths of the credits for graduation must be earned with grades of A, B, or C.

Prescribed Curricula

All students registered in the College of Home Economics follow the General Home Economics Curriculum for the first two years. At the beginning of the junior year a student may continue with the General Home Economics Curriculum, or elect one of the following special curricula, or a combination of curricula. A student who wishes to teach Home Economics may register in Home Economics Education, in the College of Education (see Home Economics Education) at the beginning of the junior year.

Following are the outlines of the Curricula for General Home Economics, Textiles and Clothing, Foods and Nutrition, and Institutional Management:

GENERAL HOME ECONOMICS

	Semester	
	I	II
<i>Freshman Year</i>		
Composition and Rhetoric (Eng. 1 y).....	3	3
General Chemistry (Chem. 1 y).....	4	4
Clothing Construction (H. E. 12 f).....	3	—
Principles of Design (H. E. 21 s).....	—	3
Reading and Speaking (P. S. 1 y).....	1	1
Physical Education (Phy. Ed. 1 y).....	1	1
*Language or Electives.....	3	3
Home Economics Lectures.....	—	—
	15	15
<i>Sophomore Year</i>		
Elements of Organic Chemistry (Chem. 12 f).....	4	—
Elementary Foods (H. E. 31 y).....	3	3
Textile Fabrics (H. E. 11 f).....	3	—
Costume Design (H. E. 24 s).....	—	3
Public Education in the United States (Ed. 2 f).....	2	—
Physical Education (Phys. Ed. 2 y).....	2	2
Language or Electives.....	3	9
	17	17
<i>Junior Year</i>		
Household Bacteriology (Bact. 3 s).....	—	3
Nutrition (H. E. 131 f and 132 s).....	3	3
Buying for the Home (H. E. 142 f).....	2	—
Advanced Clothing (H. E. 111 f).....	4	—
**Special Applications of Physics (Physics 3 s).....	—	4
***Electives.....	8	7
	17	17
<i>Senior Year</i>		
Child Study (H. E. Ed. 102 f).....	5	—
Management of the Home (H. E. 141 f).....	5	—
Choice of one unit in Foods, Clothing, Teaching, or Institutional Management.....	5	—
Interior Decoration (H. E. 121 s).....	—	3
Electives.....	—	12
	15	15

* This requirement may be waived for students entering college with three or more years of a language.

** If schedule permits Physics may be taken during the sophomore year.

*** Choice of General Zoology, Botany, or Genetics required for all students in the sophomore or junior year.

TEXTILES AND CLOTHING CURRICULUM

	Semester	
	I	II
<i>Junior Year</i>		
Household Bacteriology (Bact. 3 s).....	—	3
Special Applications of Physics (Physics 3 s).....	—	4
Nutrition (H. E. 131 f).....	3	—
Advanced Clothing (H. E. 111 f).....	4	—
Chemistry of Textiles (Chem. 15 s).....	—	4
Costume Design (H. E. 24 s).....	—	3
Electives.....	10	3
	17	17
<i>Senior Year</i>		
Management of the Home (H. E. 141 f).....	5	—
Child Study (H. E. Ed. 102 f).....	5	—
Problems and Practice in Textiles or Clothing (H. E. 113 f).....	5	—
Interior Decoration (H. E. 121 s).....	—	3
Special Clothing Problems (H. E. 112 s).....	—	3
Electives.....	—	9
	15	15

FOODS CURRICULUM

	Semester	
	I	II
<i>Junior Year</i>		
Household Bacteriology (Bact. 3 s).....	—	3
Special Applications of Physics (Physics. 3 s).....	—	4
Nutrition (H. E. 131 f and 132 s).....	3	3
Buying for the Home (H. E. 142 f).....	2	—
Chemistry of Foods (Chem. 14 f).....	4	—
Demonstrations (H. E. 133 f).....	2	—
Electives.....	6	7
	17	17
<i>Senior Year</i>		
Child Study (H. E. Ed. 102 f).....	5	—
Management of the Home (H. E. 141 f).....	5	—
Choice of one unit in Field Practice with Home Demonstration Agent, Practice in Institutional Problems, Special Food Research, etc.	5	—
Interior Decoration (H. E. 121 s).....	—	3
Advanced Foods (H. E. 134 s).....	—	3
Seminar (H. E. 161 s).....	—	3
Electives.....	—	6
	15	15

INSTITUTIONAL MANAGEMENT CURRICULUM

	Semester	
	I	II
<i>Junior Year</i>		
Household Bacteriology (Bact. 3 s).....	—	3
Special Applications of Physics (Physics 3 s).....	—	4
Nutrition (H. E. 131 f and 132 s).....	3	3
Buying for the Home (H. E. 142 f).....	2	—
Institutional Management (H. E. 143 y).....	3	3
Electives	9	4
	—	—
	17	17
<i>Senior Year</i>		
Management of the Home (H. E. 141 f).....	5	—
Child Study (H. E. Ed. 102 f).....	5	—
Practice in Institutional Management (H. E. 144 f).....	5	—
Advanced Institutional Management (H. E. 145 s).....	—	3
Interior Decoration (H. E. 121 s).....	—	3
Electives	—	9
	—	—
	15	15

THE GRADUATE SCHOOL

C. O. APPLEMAN, *Dean*.

Graduate work is offered, under the supervision of the Dean of the Graduate School, by competent members of the various faculties of instruction and research. These constitute the faculty of the Graduate School.

The general administrative functions of the faculty are delegated to the Dean and Secretary of the School and a Graduate Council.

Work in accredited research laboratories of the U. S. Department of Agriculture and other local national research agencies may be accepted, by previous arrangement, as work in residence for part of the requirement. These laboratories are located within easy reach of the University.

Admission to Graduate School

Graduates of colleges and universities of good standing are admitted to the Graduate School. Before entering upon graduate work all applicants must present evidence that they are qualified by their previous work to pursue with profit the graduate courses desired. Application blanks for admission to the Graduate School are obtained from the office of the Dean. After approval of the application, a matriculation card, signed by the Dean, is issued to the student. This card permits the student to register in the Graduate School. After payment of the fees the matriculation card is stamped and returned to the student. It is the student's certificate of membership in the Graduate School, and may be called for at any succeeding registration.

All applicants for graduate study in the University must matriculate in the Graduate School, even though they are not candidates for higher degrees. This includes the members of the summer session.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

Registration

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register in the office of the Dean of the Graduate School at the beginning of each semester. Students taking graduate work in the summer school are also required to register in the Graduate School at the beginning of each session. The program of work for the semester or summer session is entered upon three course cards, which are first signed by the professor in charge of the student's major subject and then by the Dean of the Graduate School. Two cards are retained in the office of the Graduate School. One is filed for record and the other returned to the professor in charge of the student's major subject. The student takes the third card and, in case of new stu-

dents, also the matriculation card, to the Registrar's office, where a charge slip for the fee is issued. The charge slip, together with the course card, is presented at the office of the Financial Secretary for adjustment of fees. After certification by the Financial Secretary, class cards are issued by the Registrar. Students will not be admitted to graduate courses without class cards. Course cards may be obtained at the Registrar's office or from the secretary in the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

Graduate Courses

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only those courses designated "For Graduates" or "For Advanced Undergraduates and Graduates." To encourage thoroughness in scholarship through intensive application, graduate students in the regular sessions taking courses carrying full graduate credit are limited to a program of 30 credit hours for the year. Students holding half time graduate assistantships are usually limited to eight credit hours per semester. One or two extra credits may be allowed if four or five of the total constitute Seminar and Research work.

Admission to Candidacy for Advanced Degrees

Applications for admission to candidacy for either the Master's or the Doctor's degree are made on application blanks, which are obtained at the office of the Dean of the Graduate School. These are filled out in duplicate and first approved by the professor in charge of the major subject, after consultation with the professors in charge of the minor subjects, before they are acted upon by the Graduate Council. An official transcript of the student's undergraduate record and a statement of the graduate courses which the student has completed at other institutions must accompany the applications unless these are already on file in the Dean's office. This statement must be issued by the Dean, Registrar, or other officer of the Graduate School in which the work was done.

A student making application for admission to candidacy for the degree of Doctor of Philosophy must also obtain from the head of the Modern Language department a statement that he possesses a reading knowledge of French and German.

The subject of the Master's thesis or the Doctor's dissertation must appear on the application.

Each candidate for the Master's degree is required to make application for admission to candidacy not later than the first week of the second semester of the academic year in which the degree is sought, but not until at least the equivalent of one semester's work has been completed.

Candidates for the Doctor's degree must be admitted to candidacy not later than one academic year prior to the granting of the degree. Appli-

cations of these candidates must be on file in the office of the Graduate School not later than October 1 of the same year.

Admission to candidacy in no case assures the student of a degree, but merely signifies that the candidate has met all of the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as is demanded by the requirements of the degree sought. The candidate's record in graduate work must show superior scholarship. A preliminary examination or such other substantial tests as the departments elect may also be required of candidates for the degree of Doctor of Philosophy.

Requirements for the Master's Degree

The degree of Master of Science, Master of Arts, or Master of Science in Engineering will be conferred upon resident graduates who meet the following requirements:

1. The prospective candidate is required to make application for admission to candidacy as prescribed under that heading.

2. The candidate must have received the Bachelor's degree from a college or university of sufficiently high standing and must have the necessary prerequisites for the field of advanced work chosen.

3. During a period of at least one academic year, the student must pursue a course of approved graduate study. Such a course is equivalent to 30 semester credits including a thesis approved by a committee of the faculty. From 10 to 12 credits must lie outside the major subject and form a coherent group of courses intended to supplement and support the major work. At least 18 credits, including the thesis credits, must be devoted to the major subject. The number of major credits allowed for thesis work will range from 6 to 10, depending upon the amount of work done and upon the course requirements in the major subject. The maximum credit for the one hour per week seminar courses is limited to four semester hours in the major subject and to two semester hours in the minor subjects.

4. The thesis required for the Master's degree should be typewritten on a good quality of paper 11x8½ inches in size and one copy bound in a special cover, obtained at the book store. This copy must be filed in the office of the Graduate School not later than two weeks before commencement.

5. The candidate must pass a final oral examination on all graduate work, including the thesis.

Doctor of Philosophy

1. Prerequisites for admission to candidacy for the Doctor's degree: the candidate must be a graduate of a standard college; and must have a reading knowledge of French and German, and the necessary basic training in the chosen field for advanced work.

2. Three years of graduate study will usually be required. The first two of these years may be spent in other institutions offering standard graduate work. On a part-time basis the time needed will be correspondingly increased. The degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship and ability to carry on independent research in the special field in which the major work is done.

3. The candidate must select a major and one or two closely related minor subjects, constituting a single field of research.

4. The candidate must present a dissertation within the field of research selected. This must be in the hands of the Dean of the Graduate School in printed or typewritten form at least two weeks before the time at which degrees are granted.

5. The candidate must pass a final oral examination in the major and minor subjects. The examination will be given by a committee appointed by the Dean.

Advanced Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of this University who have obtained a Bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have been engaged successfully in acceptable engineering work for three years.

2. His registration for a degree must be approved at least 12 months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

3. He shall present a satisfactory thesis on an approved subject.

4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Graduate Fees

Each graduate student is subject to a matriculation fee of \$10.00, a fixed charge of \$1.50 per semester credit, and a diploma fee of \$10.00, with an additional charge of \$10.00 for the doctor's hood.

Graduate Work in the Summer

Work done in the Summer Session of the University under the rules and regulations of the Graduate School may be counted as residence toward a graduate degree.

Students taking their major work in the field of Education may satisfy the requirements for the Master's degree by attending the Summer School for four summers and submitting a satisfactory thesis.

Fellowships and Graduate Assistantships

A number of fellowships and graduate assistantships have been established by the University. They are open to graduates of standard colleges and universities. All applications for both fellowships and graduate assistantships should be filed with the Dean of the Graduate School not later than May 15 of each year. Blanks for this purpose may be obtained from the office of the Graduate School. Applications must be accompanied by sufficient evidence of necessary training and ability to pursue with profit the graduate work desired. Such evidence will include testimonials from instructors and an official transcript of the undergraduate work.

The fellowships are worth \$500, and it is possible for a fellow to complete the requirements for the Master's degree in one academic year. In certain cases fellows may be required to spend two or three summer months in addition to the nine months of the college year. Each fellow is expected to give a limited portion of his time to instruction or perform equivalent prescribed duties for his major department.

The stipend attached to the graduate assistantships is \$1,000 per annum and the appointments are made for twelve months, with one month's vacation. The minimum time required for the Master's degree is two years, since one-half of the assistant's time is devoted to instruction or research. Several \$1,000 research assistantships are offered by the Experiment Station and the service required is in connection with research projects. Graduate students holding appointments as fellows or graduate assistants are exempt from all fees except the diploma fee.

SUMMER SCHOOL

WILLARD S. SMALL, *Director.*

A summer session of six weeks is conducted at College Park. The program is designed to serve the needs of three classes of students: teachers and supervisors of the several classes of school work—elementary, secondary, and vocational; special students, as farmers, breeders, dairymen, home makers, chemists, public speakers, graduate students; and students who are candidates for degrees in agriculture, arts and sciences, education, engineering, and home economics.

Terms of Admission

Teachers and special students not seeking a degree are admitted without examination to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer School.

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree.

Credits and Certificates

The semester hour is the unit of credit as in other sessions of the University. During the summer session, a lecture course meeting five times a week for six weeks and requiring the standard amount of outside work, is given a weight of two semester hours.

Appropriate educational courses satisfactorily completed will be credited by the State Superintendent of Schools toward meeting the minimum requirements of professional preparation as follows:

- (1) For teaching in the elementary schools of the State, including renewal of certificates and advancing the grade of certificates.
- (2) For teaching in high schools of the State and for renewal of high school certificates.
- (3) For teaching vocational agricultural and home economics and for renewal of vocational teachers' certificates.
- (4) For high school principalships.
- (5) For elementary school principalships.

Summer Graduate Work

Special arrangements have been made for persons wishing to do graduate work in summer. Teachers and other graduate students working for a degree on the summer plan must meet the same requirements and proceed in the same way as do students enrolled in the other sessions of the University.

For detailed information in regard to the Summer Session consult the special Summer School announcement, issued annually in April.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ROBERT S. LYTLE, *Major Infantry (D.O.L.), U. S. Army, Professor*

RESERVE OFFICERS' TRAINING CORPS

The work in this department is based upon the provisions of Army Regulations No. 145-10, War Department.

Authorization

An infantry unit of the Senior Division of the Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended.

Object

The primary object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. It is intended to attain this object during the time the students are pursuing their general or professional studies with the least practical interference with their civil careers, by employing methods designed to fit men, physically, mentally, and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will aid greatly in the development of better citizens.

Advanced Work

Students who complete the basic course satisfactorily and who are recommended by the Professor of Military Science and Tactics, and whose application is approved by the President, may continue their military training for a period of two years in the Advanced Course.

Time Allotted

For first and second year, basic course, three periods a week of not less than one hour each are devoted to this work, of which at least one hour is utilized for theoretical instruction.

For third and fourth years, advanced course, elective, five periods a week of not less than one hour each are devoted to this work, of which at least three periods are utilized for theoretical instruction.

Physical Training

Physical training forms an important part in military instruction, and it is the policy of the Military Department to encourage and support the physical training given by civilian teachers, thus co-operating in an effort to promote a vigorous manhood.

Physical Examination

All members of the Reserve Officers' Training Corps are required to be examined physically at least once after entering the University.

Uniforms

Members of the Reserve Officers' Training Corps must appear in proper uniform at all military formations and at such other times as the Professor of Military Science and Tactics may designate with the approval of the President.

Uniforms, or commutation in lieu of uniforms, for the Reserve Officers' Training Corps, will be furnished free by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features; or, if commutation of uniforms is furnished, then such uniform as may be adopted by the University. Such uniforms must be kept in good condition by the students. They remain the property of the Government; and, though intended primarily for use in connection with military instruction, may be worn at any other time unless the regulations governing their use are violated. The uniform cannot be worn in part. Uniforms which are furnished by the Government will be returned to the Military Department at the end of the year or before, if the student leaves the University. In case commutation of uniforms is furnished, the uniform so purchased becomes the property of the students upon completion of two years' work.

Commutation

Those students who elect the advanced course and who have signed the contract with the Government to continue in the Reserve Officers' Training Corps for the two remaining years of the advanced course are entitled to a small per diem money allowance payable quarterly from and including the date of contract until they complete the course at the institution.

Summer Camps

An important and excellent feature of the Reserve Officers' Training Corps is the summer camp. In specially selected parts of the country, camps are held for a period not exceeding six weeks for students who are members of the Reserve Officers' Training Corps. These camps are under the close and constant supervision of army officers, and are intended primarily to give a thorough and comprehensive practical course of instruction in the different arms of the service.

Parents may feel assured that their sons are carefully watched and safeguarded. Wholesome surroundings and associates, work and healthy recre-

ation are the keynote to contentment. Social life is not neglected, and the morale branch exercises strict censorship over all social functions.

The attendance at summer camps is compulsory only for those students who are taking the advanced course, which as has been previously stated is elective.

The students who attend the summer camps are under no expense. The Government furnishes transportation from the institution to the camp and from the camp to the institution, or to the student's home, unless the mileage is greater than that from the camp to the institution. In this case, the amount of mileage from the camp to the institution is allowed the student. Quarters and food are furnished. The Advanced Course students, in addition to receiving quarters and food, are paid seventy cents (\$0.70) for each day spent in camp.

Commissions

(a) Each year, upon completion of the Advanced Course, students qualified for commissions in the Reserve Officers' Corps will be selected by the head of the institution and the professor of Military Science and Tactics.

(b) The number to be selected from each institution and for each arm of the service will be determined by the War Department.

(c) This University has been designated by the War Department annually for several consecutive years as a "Distinguished College." This designation indicates that the work of its R. O. T. C. unit has been recognized by the Federal Government as being of a superior order.

This classification also permits the Professor of Military Science and Tactics to designate an Honor Graduate from the members of the second year Advanced Course, who may be commissioned as Second Lieutenant of Infantry in the Regular Army, if he so desires, by passing the required physical examination. This designation as Honor Graduate exempts the individual selected from all academic examinations usually required for a Regular Army Commission.

The acceptance of this opportunity is, of course, optional with the student.

Credits

Military instruction at this University is on a par with other university work, and the requirements of this department as to proficiency the same as those of other departments.

Those students who have received military training at any educational institution under the direction of an army officer detailed as professor of military science and tactics may receive such credit as the professor of military science and tactics and the President may jointly determine.

PHYSICAL EDUCATION AND RECREATION

The work in physical education and recreation is done in co-operation with the Military Department. As far as possible the work along all these lines is co-ordinated with a view to having each student in the institution engage in some form of exercise best suited to his particular case.

The work at present reaches all students either through the military exercises, through intramural sports, through intercollegiate athletics, or through the special work given to those not particularly fitted for any of these forms. At the beginning of the year a physical examination is given the students, especial attention being paid to the members of the freshman class. All male members of the freshman and sophomore classes who are physically sound take part in the military drills and exercises. To meet the particular needs of freshmen and sophomores who do not qualify physically for military training, special programs of setting-up exercises and drills are devised.

Physical Education beyond the freshman and sophomore classes is not compulsory. Those who do not engage in it are offered opportunity to play tennis, engage in intramural games, or take part in some other form of competitive sport. All students have opportunities to become members of the squads playing in intercollegiate athletics. With the exception possibly of a few members of the junior and senior classes, the University is reaching all its students with some form of developmental physical exercise. A modern gymnasium, two athletic fields, and tennis courts offer excellent facilities.

SCHOOL OF DENTISTRY

J. BEN ROBINSON, *Dean*.

Faculty Council

GEORGE M. ANDERSON, D.D.S.

ROBERT P. BAY, M.D.

JOSE A. DAVILA, D.D.S.

HORACE M. DAVIS, D.D.S., F.A.C.D.

OREN H. GAVER, D.D.S.

EDWARD HOFFMEISTER, A.B., D.D.S.

BURT B. IDE, D.D.S.

HOWARD J. MALDEIS, M.D.

ROBERT L. MITCHELL, Phar. G., M.D.

ALEXANDER H. PATERSON, D.D.S., F.A.C.D.

J. BEN ROBINSON, D.D.S., F.A.C.D.

The University of Maryland was created by an act of the Maryland Legislature, December 18, 1807, for the purpose of offering a course of instruction in medical science. There were at that period but four medical schools in America—the University of Pennsylvania, founded in 1765; Harvard University, in 1782; Dartmouth College, in 1798, and the College of Physicians and Surgeons of New York, May, 1807.

The first lectures on Dentistry in America were delivered by Horace H. Hayden, M. D., at the University of Maryland in the year 1837. A movement was started at that time to create a department of dentistry, and application was made to the Regents of the University for permission to establish such work in connection with the School of Medicine. This request being refused, a charter was applied for and granted in 1840, establishing the Baltimore College of Dental Surgery, the first dental school in the world. Lectures were begun in 1840, and the first class graduated in 1841. In 1873 the Maryland Dental College, an offspring of the Baltimore College of Dental Surgery, was organized, and continued instruction in dental subjects until 1879, when it was consolidated with the Baltimore College of Dental Surgery.

A department of dentistry was organized at the University of Maryland in the year 1882, graduating its first class in 1883 and a class each subsequent year to the merger—June, 1923. This school was chartered as a corporation and continued as a privately owned and directed institution until 1920, when it became a State institution. The Dental Department of the Baltimore Medical College was established in 1895, continuing until 1913, when it merged with the Dental Department of the University of Maryland.

The final combining of the dental educational interests of Baltimore was affected June 15, 1923, by the amalgamation of the University of Maryland School of Dentistry and the Baltimore College of Dental Surgery, the latter being continued as the School of Dentistry of the University of Maryland.

Thus we find in the present School of Dentistry of the University a grouping and concentration of the various efforts at dental education in Maryland. From these component elements have radiated developments of the art and science of dentistry until the potential strength of the alumni is second to none either in numbers or degree of service to the profession.

Buildings

Instruction in dentistry in the Baltimore College of Dental Surgery, Dental School, University of Maryland, is administered in Baltimore at Lombard and Greene Streets. Instruction in the School of Dentistry is scheduled in three separate buildings, equipped satisfactorily to take care of the requirements of the course. A recent appropriation of almost a half million dollars has been made to provide a new building and equipment for the schools of Dentistry and Pharmacy to be occupied October first, 1929. This sum will provide sufficient floor space and adequate equipment to take care of the dental instruction in a most satisfactory manner.

Requirements for Matriculation

The School of Dentistry is a member in good standing of the American Association of Dental Schools, and conforms to the rules and regulations of that body.

The present requirement for matriculation in the School of Dentistry is graduation from an accredited high school with fifteen units of credit, accompanied by a certificate from the principal of the high school that the applicant is in every way qualified to do college work. This requirement will admit students to the five-year course in dentistry, now being required.

Applicants for matriculation must present their credentials for verification to the Registrar of the University of Maryland, Baltimore, Maryland. A blank form for submitting credentials may be had by applying to the Dean of the School of Dentistry. The blank must be filled out in full as indicated by various items on the form, signed by the prospective dental student, and returned to the Registrar's office with the \$2.00 investigation fee.

Length of Course

A five-year course of instruction is offered. The many obvious advantages in the consecutive five years of professional study over the one year of college work and four years of dentistry, or the two years of college work and three years of dentistry, offered by most dental schools, has influenced the adoption of the five-year plan. Admission to advanced standing may be secured by offering acceptable college credits for academic requirements appearing in the first year.

Advanced Standing

Applicants showing in addition to high school requirements, college credits of equal value in courses contained in the dental curriculum may receive advanced credit on those subjects. Thirty semester hours of college credit

entitle the applicant to second-year rating, with the opportunity to complete the course in four years, provided his college record shows the following to the credit of the applicant:

Inorganic Chemistry.....	8 hours
Zoology	8 hours
Mathematics	6 hours
English	6 hours

Graduates from reputable and accredited colleges and universities or those with at least two years completed work from Class A medical schools, will be given advanced credit in completed subjects and advanced standing in the course.

A student who desires to transfer to this school from another recognized dental school must present credentials signed by the Dean, Secretary, or Registrar of the school from which he is transferring. No student who has incurred a condition or a failure in any subject at the school from which he desires to transfer will be accepted. The student transferring must furnish evidence that he is in possession of the necessary high school credits.

Attendance Requirements

In order to receive credit for a full session, each student must have entered and be in attendance on the day the Regular Session opens, at which time lectures in all classes begin, and remain until the close of the session, the dates for which are announced in the Calendar.

In case of serious personal illness as attested by a physician, a student may register not later than the twentieth day following the advertised opening of the Regular Session. Students may register and enter not later than ten days after the beginning of the session, but such delinquency will be charged as absence from class.

In certain unavoidable circumstances of absence the Dean may honor excuses, but students with less than a minimum of eighty-five per cent. attendance will not be promoted to the next succeeding class. Regular attendance is demanded of all students. This rule will be rigidly enforced.

Promotion

In order that credit be given in any subject a grade of 75 per cent. must be earned. A student to be promoted to the next succeeding year must have passed courses amounting to at least 80 per cent. of the total scheduled hours of the year.

A grade between 60 per cent. and passing mark is a *condition*. A grade below 60 per cent. is a *failure*. A condition may be removed by an examination. In such effort inability to make a passing mark is considered a *failure*. A failure can be removed only by repeating the course. A student with combined conditions and failures amounting to 40 per cent. of the scheduled hours of the year will be required to repeat his year. Students who are required to repeat courses must pay regular fees.

Equipment

A complete list of all necessary instruments and materials for technic and clinic courses and textbooks for lecture courses will be announced for the various classes. Each student will be required to provide himself with whatever is necessary to meet the needs of his course and present same to a responsible class officer for inspection. No student will be permitted to go on with his class who does not meet this requirement.

Department

The profession of dentistry demands, and the School of Dentistry requires evidence of good moral character of its students. The conduct of the student in relation to his work and fellow-students will indicate his fitness to be taken into the confidence of the community as a professional man. Integrity, sobriety, temperate habits, truthfulness, respect for authority and associates, honesty in the transaction of business affairs as a student will be considered as evidence of good moral character necessary to the granting of a degree.

Requirement for Graduation

The degree of Doctor of Dental Surgery is conferred upon the completion of the five-year course of study, each year to consist of thirty-two weeks, and each week to consist of six days of school work. The candidate must be twenty-one years of age, must possess a good moral character, and must have passed in all branches of the curriculum.

Expenses

Matriculation fee (paid only once).....	\$ 10.00
Tuition, resident student.....	200.00
Tuition, non-resident student.....	250.00
Dissecting fee (paid only once).....	15.00
Laboratory fee.....	20.00
Graduation fee.....	15.00
Locker fee.....	3.00

Matriculation fee must be paid when registration card is issued. Tuition fee may be paid one-half October first and one-half February first. Dissecting fee must be paid to secure class card for admission to clinics. Laboratory fee must be paid at the beginning of the session. Graduation fee must be paid on May first.

All students of the several classes will be required to obtain a card of registration at the office of the Registrar, pay to the Comptroller one-half of the tuition fee, and the full amount of the laboratory fee before being regularly admitted to class work. The balance of tuition and other incidental fees must be in the hands of the Comptroller on February 1st, before beginning work of the second semester.

According to the policy of the School of Dentistry no fees will be returned. In case the student discontinues his course any fees paid will be credited to a subsequent course, but are not transferable.

These requirements will be rigidly enforced.

Students may matriculate by mail by sending the matriculation fee to the Registrar, University of Maryland, Lombard and Greene Streets, Baltimore, Md.

DEFINITION OF STUDENT RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration, their parents or guardians have been residents of this State for at least one year.

Adult students are considered to be resident students, if at the time of their first registration they have been residents of this State for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents or guardians move to and become legal residents of this State.

THE GORGAS ODONTOLOGICAL SOCIETY

The Gorgas Odontological Society was organized in 1914 as an honorary student dental society with scholarship as a basis for admission. The society is named after Dr. Ferdinand J. S. Gorgas, a pioneer in dental education, a teacher of many years' experience, and during his life a great contributor to dental literature. It was with the idea of perpetuating his name that the society adopted it.

Students become eligible for membership at the beginning of their Fourth Year in the dental school, if, during their preceding years, they have attained an average of 85 per cent. or more in all of their studies. Meetings are held once each month and are addressed by prominent dental and medical men, an effort being made to obtain speakers not connected with the University. In this way, the members have an opportunity, even while students, to hear men associated with other educational institutions.

SCHOLARSHIPS

A number of scholarships from various organizations and educational foundations have been available to students in the School of Dentistry. These scholarships have been secured on the basis of excellence in scholastic attainment and the need on the part of students for assistance in completing their course in dentistry. It has been the policy of the Faculty to recommend only those students in the last two years for such privileges.

The Henry Strong Educational Foundation—From this fund, established under the will of General Henry Strong of Chicago, an annual allotment of

\$600 is made to the Baltimore College of Dental Surgery, Dental School, University of Maryland, for loan scholarships available for the use of young men and women students, under the age of twenty-five. Recommendations for the privileges of these scholarships are limited to students in the fourth and last years. Only those students who through stress of circumstances require financial aid and who have demonstrated excellence in educational progress are considered in making nominations to the Secretary of this fund.

The Edward S. Gaylord Educational Endowment Fund—Under a provision of the will of the late Dr. Edward S. Gaylord of New Haven, Conn., an amount approximating \$16,000 was left to the Baltimore College of Dental Surgery, Dental School, University of Maryland, the proceeds of which are to be devoted to aiding worthy young men in securing dental education.

THE SCHOOL OF LAW

HENRY D. HARLAN, *Dean*.

THE FACULTY COUNCIL

HON. HENRY D. HARLAN, A.M., LL.B., LL.D.
RANDOLPH BARTON, JR., Esq., A.B., LL. B.
EDWIN T. DICKERSON, Esq., A.M., LL.B.
CHARLES MCHENRY HOWARD, Esq., A.B., LL.B.
HON. MORRIS A. SOPER, A.B., LL.B.
ROBERT H. FREEMAN, Esq., A.M., LL.B.
W. CALVIN CHESTNUT, Esq., A.B., LL.B.
G. RIDGELY SAPPINGTON, Esq., LL.B.

While the first faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study Addressed to Students and the Profession Generally," which the North American Review pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. This was suspended in 1836 for lack of proper pecuniary support. In 1869 the School of Law was organized, and in 1870 regular instruction therein was again begun. From time to time the course has been made more comprehensive, and the staff of instructors increased in number. Its graduates now number more than two thousand, and included among them are a large proportion of the leaders of the Bench and Bar of the State and many who have attained prominence in the profession elsewhere.

The building for the School of Law adjoins that for the School of Medicine, and part of its equipment is a large library maintained for use of the students, which contains carefully selected text-books on the various subjects embraced in the curriculum, reports of American and English courts, digests and standard encyclopedias. No fee is charged for the use of the library. Other libraries also are available for students.

Course of Instruction

The School of Law is divided into two divisions, the Day School and the Evening School. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same.

The Day School course covers a period of three years of thirty-two weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The Practice Court sessions are held on Friday evenings from 8.00 to 10.00 P. M.

The Evening School course covers a period of four years of forty weeks each, exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evenings of each week from 6.30 to 9.30 P. M. This plan leaves the alternate evenings for study and preparation by the student.

The course of instruction in the School of Law is designed thoroughly to equip the student for the practice of his profession when he attains the Bar. Instruction is offered in the various branches of the common law, of equity, of the statute law of Maryland, and of the public law of the United States. The course of study embraces both the theory and practice of the law, and aims to give the student a broad view of the origin, development, and function of law, together with a thorough practical knowledge of its principles and their application. Analytical study is made of the principles of substantive and procedural law, and a carefully directed practice court enables the student to get an intimate working knowledge of procedure.

Special attention is given to the statutes in force in Maryland, and to any peculiarities of the law in that State, where there are such. All of the subjects upon which the applicant for the Bar in Maryland is examined are included in the curriculum. But the curriculum includes all of the more important branches of public and private law, and is well designed to prepare the student for admission to the Bar of other States.

Requirements for Admission

Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least two years of college work, or such work as would be accepted for admission to the third or junior year in the College of Liberal Arts of an accredited college or university in this State.

Special Students—A limited number of students applying for entrance with less than the academic credit required of candidates for the law degree, who are over twenty-one years of age, and who, in the opinion of the Faculty Council, possess special qualifications for the study of law, may be admitted as candidates for the certificate of the school, but not for the degree.

Combined Program of Study Leading to the Degrees of Bachelor of Arts and Bachelor of Laws

The University offers a combined program in arts and law leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at College Park. The fourth year they will register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work in the Evening School, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded

upon the completion of the work prescribed for graduation in the School of Law.

Details of the combined course may be had upon application to the Registrar, University of Maryland, College Park, Md., or by reference to page 94.

Advanced Standing

Students complying with the requirements for admission to the school who have, in addition, successfully pursued the study of law elsewhere in an accredited law school, may, upon presentation of a certificate from such accredited law school showing an honorable dismissal therefrom, and the successful completion of equivalent courses therein, covering at least as many hours as are required for such subjects in this school, receive credit for such courses and be admitted to advanced standing. No credit will be given for study pursued in a law office, and no degree will be conferred until after one year of residence and study at this school.

Fees and Expenses

The charges for instruction are as follows:

Registration fee to accompany application.....	\$ 2.00
Matriculation fee, payable on first registration.....	10.00
Diploma fee, payable upon graduation.....	15.00
Tuition fee, per annum:	
Day School.....	\$200.00
Evening School.....	150.00

An additional tuition fee of \$50.00 per annum must be paid by students who are non-residents of the State of Maryland.

The tuition fee is payable in two equal instalments, one-half at the time of registration for the first semester, and one-half at the time of registration for the second semester.

Further information and a special catalogue of the School of Law may be had upon application to the School of Law, University of Maryland, Lombard and Greene Streets, Baltimore, Md.

THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS

J. M. H. ROWLAND, *Dean*.

MEDICAL COUNCIL

ARTHUR M. SHIPLEY, M.D., Sc.D.
GORDON WILSON, M.D.
HARRY FRIEDENWALD, A.B., M.D.
WILLIAM S. GARDNER, M.D.
STANDISH MCCLEARY, M.D.
JULIUS FRIEDENWALD, A.M., M.D.
J. M. H. ROWLAND, M.D.
ALEXIUS MCGLANNAN, A.M., M.D.
HUGH R. SPENCER, M.D.
H. BOYD WYLIE, M.D.
CARL L. DAVIS, M.D.
WILLIAM H. SCHULTZ, Ph.B., Ph.D.
MAURICE C. PINCOFFS, S.B., M.D.
FRANK W. HACHTEL, M.D.
EDWARD UHLENHUTH, Ph.D.
HARRY J. DEUEL JR., Ph.D.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in America.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837); and here were first installed independent chairs for the teaching of diseases of women and children (1867), and of eye and ear diseases (1873).

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for senior students first was established.

Clinical Facilities

The University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye cases.

Besides its own hospital, the School of Medicine has control of the clinical facilities of the Mercy Hospital, in which were treated last year more than 30,000 persons.

In connection with the University Hospital, an outdoor obstetrical clinic is conducted. During the past year 1,552 cases were treated in the hospital and outdoor clinic.

The hospital now has about 285 beds—for medical, surgical, obstetrical, and special cases; and furnishes an excellent supply of clinical material for third and fourth-year students.

Dispensaries and Laboratories

The dispensaries associated with the University Hospital and Mercy Hospital are organized on a uniform plan in order that teaching may be the same in each. Each dispensary has departments of Medicine, Surgery, Obstetrics, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, and Tuberculosis. All students in their junior year work one day of each week in one of these dispensaries; all students in the senior year work one hour each day; 99,986 cases were treated last year, which gives an idea of the value of these dispensaries for clinical teaching.

Laboratories conducted by the University purely for medical purposes are the Anatomical, Chemical, Experimental Physiology, Physiological Chemistry, Histology and Embryology, Pathology and Bacteriology, Clinical Pathology, Pharmacology, and Operative Surgery.

Prizes and Scholarships

The following prizes and scholarships are offered in the School of Medicine. (For details see School of Medicine Bulletin.)

Faculty Medal: Hirsh Prize; The Dr. Samuel Leon Frank Scholarship; Hitchcock Scholarship; The Randolph Winslow Scholarship; The University Scholarship; The Frederica Gehrmann Scholarship; The Dr. Leo Karlinsky Scholarship; The Clarence and Genevra Warfield Scholarships; Walter B. Brooks Scholarship; Israel and Cecilia A. Cohen Scholarship.

Requirements for Admission

Admission to the curriculum in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland, Baltimore, Maryland. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student's Certificate are as follows:

(a) The completion of a standard four-year high school course or the equivalent, and in addition:

*(b) Two years, sixty semester hours of basic college credits, including chemistry, biology, physics, and English, and exclusive of Military Drill or Physical Education as outlined in the Pre-Medical Curriculum, or its equivalent, will meet the minimum requirement for admission. Students are strongly recommended, however, to complete the three-year pre-medical curriculum of 99 semester hours before making application for admission.

Women are admitted to the School of Medicine of this University.

Expenses

The following are the fees for students in the School of Medicine:

Matriculation	Tuition		Laboratory	Graduation
	Resident	Non-Resident		
\$10.00 (only once)	\$300.00	\$450.00	\$20.00 (yearly)	\$15.00
Estimated living expenses for students in Baltimore:				
Items				
	Low	Average	Liberal	
Books	\$50	\$75	\$100	
College Incidentals	20	20	20	
Board, eight months.....	200	250	275	
Room rent.....	64	80	100	
Clothing and laundry.....	50	80	150	
All other expenses.....	25	50	75	
Total.....	\$409	\$556	\$720	

* For admission to the Pre-Medical Curriculum the requirements are the same as for the freshman class in the College of Arts and Sciences of the University with the prescribed addition of two years of one foreign language. (See Section I, "Entrance.")

SCHOOL OF NURSING

ANNIE CRIGHTON, R.N., *Director and Superintendent of Nurses.*

The University of Maryland School of Nursing was established in the year 1889. Since that time it has been an integral part of the University of Maryland Hospital.

The school is non-sectarian, the only religious services being morning prayers.

The University of Maryland Hospital is a general hospital containing about 285 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by well-qualified instructors and members of the medical staff of the University.

Programs Offered

The program of study of the School is planned for two groups of students: (a) The three-year group; (b) the five-year group.

Requirements for Admission

In order to become a candidate for admission to the three-year program of the School, application must be made in person or by letter to the superintendent of nurses. An application by letter should be accompanied by a statement from a clergyman, testifying to good moral character, and from a physician certifying to sound health and unimpaired faculties. No person will be considered who is not in good physical condition and between the ages of 18 and 35. She must also show that she has a high-school education or its equivalent. This is the minimum requirement, for women of superior education and culture are given preference provided they meet the requirements in other particulars.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of probation is left to the decision of the superintendent of nurses. Misconduct, disobedience, insubordination, inefficiency, or neglect of duty is sufficient cause for dismissal at any time by the superintendent of nurses, with the approval of the President of the University.

Students are admitted to this group in February and September.

The requirements for admission to the five-year program of the School of Nursing are the same as for the other colleges and schools. (See Section I, "Entrance.")

Three-Year Program

The three-year program is designed to meet the requirements for the Diploma in Nursing, and comprises the work of the Junior, Intermediate, and Senior years.

Junior Year

The Junior Year is divided into two periods. The first term is the preparatory period (four months) and the second the junior term.

In the preparatory term the student is given practical instruction in the following:

Junior Year—First Term

1. The making of hospital and surgical supplies. The cost of hospital materials, apparatus, and surgical instruments.
2. Household economics and the preparation of foods.
3. The hospital outpatients department and dispensary.

During this term the practical work is done under constant supervision, and teaching is given correlatively in the class room.

Excursions are made to markets, hygienic dairies, linen-rooms, laundry, and storeroom.

The maximum number of hours per week in formal instruction divided into lecture and laboratory periods is thirty hours, and includes courses in anatomy and physiology, dietetics, materia medica, personal hygiene, bacteriology, practical nursing, drugs and solutions, household economics, short course in ethics and history of nursing.

At the close of the first half of the junior year the students are required to pass satisfactorily both the written and oral tests, and failure to do so will be sufficient reason to terminate the course at this point.

Subsequent Course

The course of instruction, in addition to the probationary period, occupies two and three-fourths years, and students are not accepted for a shorter period.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.

Throughout the three years, regular courses of instruction and lectures are given by members of the medical and nursing school faculties.

Junior Year—Second Term

During this period the students receive theoretical instruction in massage, general surgery, urinalysis, and advanced nursing procedures. Practical instruction is received in the male and female, medical, surgical, and children's wards.

Intermediate Year

During this period the theoretical instruction includes pediatrics, infectious diseases, obstetrics, gynecology, diet in disease and orthopedics. The practical work provides experience in the nursing of obstetrical and gynecological patients in the operating rooms and the outpatient department.

Senior Year

During this period the student receives short courses of lectures on subjects of special interest. These include a consideration of the work of institutions of public and private charities, of settlements, and of various branches of professional work in nursing.

Experience is given in executive and administration work to those showing exceptional ability in the senior year. With these students conferences are held on administration and teaching problems.

Hours on Duty

During the preparatory period the students are engaged in class work for the first three months with no general duty in the hospital, and for the remainder of this period they are sent to the wards on eight hour duty. During the Junior, Intermediate, and Senior years the students are on eight hour day duty and ten hours night duty, with six hours on holidays and Sundays. The night duty periods are approximately two months each, with one day at the termination of each term for rest and recreation. The period of night duty is approximately five to six months during the three years. The first three months of the preparatory period are devoted to theoretical instruction given entirely in the lecture and demonstration rooms of the training school and hospital and medical school laboratories.

Sickness

A physician is in attendance each day, and when ill all students are cared for gratuitously. The time lost through illness in excess of two weeks, during the three years, must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Vacations

Vacations are given between June and September. A period of three weeks is allowed the student at the completion of first and second years.

Expenses

A student receives her board, lodging, and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her

own uniforms made in accordance with the hospital regulations. After being accepted as a student nurse she wears the uniform furnished by the hospital. The student is also provided with textbooks, and in addition to this is paid five dollars (\$5.00) a month. Her personal expenses during the course of training and instruction will depend entirely upon her individual habits and tastes.

Five-Year Program

In addition to the regular three-year course of training the University offers a combined Academic and Nursing program leading to the degree of Bachelor of Science and a Diploma in Nursing.

The first two years of the course (or pre-hospital period), consisting of 68 semester hours, as shown on page 94 of this catalogue, are spent in the College of Arts and Sciences of the University, during which period the student has an introduction to the general cultural subjects which are considered fundamental in any college training. At least the latter of these two years must be spent in residence at College Park in order that the student may have her share in the social and cultural activities of college life. The last three years are spent in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, which is also affiliated with the School of Medicine of the University. In the fifth year of the combined program certain elective courses such as Public Health Nursing, Nursing Education, Practical Sociology, and Educational Psychology are arranged.

Degree and Diploma

The Diploma in Nursing will be awarded to those who have completed satisfactorily the three-years' program.

The degree of Bachelor of Science and the Diploma in Nursing are awarded to the students who complete successfully the prescribed combined academic and nursing program.

Scholarships

One scholarship has been established by the alumnae of the training school. It entitles a nurse to a six-weeks' course at Teachers College, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work.

An alumnae pin is presented by the Woman's Auxiliary Board to the student who, at the completion of three years, shows exceptional executive ability.

A scholarship of the value of \$50.00, known as the Edwin and Leander M. Zimmerman Prize, is given in the senior year for practical nursing.

A scholarship of the value of \$50.00, known as the Elizabeth Collins Lee Prize, is given in the senior year to the student whose work has been of the second highest excellence.

SCHOOL OF PHARMACY

A. G. DU MEZ, *Dean.*

E. F. KELLY, *Advisory Dean.*

EXECUTIVE COMMITTEE

A. G. DU MEZ

E. F. KELLY

CHARLES C. PLITT

GLENN L. JENKINS

J. CARLTON WOLF

B. OLIVE COLE

H. E. WICH

The School of Pharmacy was organized in 1841, largely at the instance of members of the Faculty of Medicine, and for a time the lectures were delivered at the Medical School. Later it became separated, and continued as an independent organization called the Maryland College of Pharmacy, until it finally became part of the University in 1904. With but one short intermission, which was prior to 1865, it has continuously exercised its functions as a teaching school of pharmacy.

Location

The School of Pharmacy is located at 6 and 8 South Greene Street, in close proximity to the Schools of Medicine, Law, and Dentistry.

Policy and Degrees

The chief purpose of this school is to prepare its matriculates for the intelligent practice of dispensing pharmacy, although certain advanced work intended to fit the student for service in the other branches of pharmacy is offered.

Upon completion of the first three years of the course, the diploma of Graduate in Pharmacy (Ph. G.) is awarded, which satisfies the college educational requirements of the various States for registration as a pharmacist.

The degree of Bachelor of Science in Pharmacy (B. S. in Phar.) will be given upon the successful completion of the work prescribed for the entire four years.

Combined Curriculum in Pharmacy and Medicine

A combined curriculum has been arranged with the School of Medicine of the University by which students may obtain the degree of Bachelor of Science in Pharmacy and Doctor of Medicine in seven years. Students who

successfully complete the first three years of the course in Pharmacy and an additional four semester hours in Zoology, and show that they are qualified by character and scholarship to enter the medical profession, are eligible for admission into the School of Medicine of the University; and upon the successful completion of the first two years of the medical course will be awarded the degree of Bachelor of Science in Pharmacy by the School of Pharmacy.

This privilege will be open only to students who maintain a uniformly good scholastic record during the first two years of the course in Pharmacy; and those who wish to avail themselves of it must so advise the School of Pharmacy before entering upon the work of the third year, in order that provision may be made for the additional instruction in Zoology.

Recognition

This school holds membership in the American Association of Colleges of Pharmacy. The object of the Association is to promote the interests of pharmaceutical education; and all institutions holding membership must maintain certain minimum requirements for entrance and graduation. Through the influence of this Association, uniform and higher standards of education have been adopted from time to time; and the fact that several States by law or by Board ruling recognize the standards of the Association is evidence of its influence.

The school is registered in the New York Department of Education, and its diploma is recognized in all States.

Requirements for Admission

The applicant must have completed a four-year standard high school course or its equivalent. A minimum age of seventeen years is demanded except when the candidate is a graduate of an accredited high school or of an institution of equal grade.

Admission to the course in pharmacy is by certificate issued by the Registrar of the University of Maryland, Lombard and Greene Streets, Baltimore, Md. The certificate is issued on the basis of credentials, or by examination, or by both. Evaluation of credentials can be made only by the Registrar, and all applicants, whether their entrance qualifications are clearly satisfactory as per the requirements for matriculation, outlined above, or not, must secure a certificate from the Registrar to be presented to the School of Pharmacy before they can be matriculated.

Applicants should secure an application blank for entrance from the Registrar of the University or from the office of the School of Pharmacy, and return it properly executed at the earliest possible date. Diplomas or certificates need not be sent. The Registrar will secure all credentials desired after the application blank has been received, and the applicant will be notified of the result of the investigation.

Applicants whose credentials do not meet the requirements must pass a satisfactory examination in appropriate subjects given by a recognized College Entrance Examination Board, to make up the required number of units. A fee is charged for these examinations.

Credit will be given for first-year pharmaceutical subjects to those students coming from schools of pharmacy holding membership in the American Association of Colleges of Pharmacy, provided they present a proper certificate of the satisfactory completion of such subjects and meet the entrance requirements of this school. Credit for general educational subjects will be given to those students presenting evidence of having completed work of equal value.

Requirements for Graduation

1. The candidate must possess a good moral character.
2. He must have completed successfully the work specified in the first three years of the course if a candidate for the Graduate in Pharmacy (Ph.G.) diploma; or four years if a candidate for the degree of Bachelor of Science in Pharmacy. In either case the last year must be taken in this school.

Matriculation and Registration

The Matriculation Ticket must be procured from the office of the School of Pharmacy, and must be taken out before entering the classes. All students after matriculation are required to register at the Office of the Registrar. The last date of matriculation is October 7th, 1929.

Expenses

Matriculation	Tuition		Laboratory	Graduation
	Resident	Non-Resident		
\$10.00 (only once)	\$200.00	\$250.00	\$20.00 (yearly)	\$10.00

Tuition for the first semester and breakage fee shall be paid to the Comptroller at the time of registration; and tuition for the second semester and graduation fee (returned in case of failure) on or before February 3, 1930.

A bulletin giving details of the course in Pharmacy may be obtained by addressing the School of Pharmacy, University of Maryland, Baltimore, Maryland.

STATE BOARD OF AGRICULTURE

816 Fidelity Building, Baltimore, Maryland.

The law provides that the personnel of the State Board of Agriculture shall be the same as the Board of Regents of the University of Maryland. The President of the University is the Executive Officer of the State Board of Agriculture.

General Powers of Board: The general powers of the Board as stated in Article 7 of the Laws of 1916, Chapter 391, are as follows:

"The State Board of Agriculture shall investigate the conditions surrounding the breeding, raising, and marketing of livestock and the products thereof, and contagious and infectious diseases affecting the same; the raising, distribution, and sale of farm, orchard, forest, and nursery products, generally, and plant diseases and injurious insects affecting the same; the preparation, manufacture, quality analysis, inspection, control, and distribution of animal and vegetable products, animal feeds, seeds, fertilizers, agricultural lime, agricultural and horticultural chemicals, and biological products; and shall secure information and statistics in relation thereto and publish such information, statistics, and the results of such investigations at such times and in such manner as to it shall seem best adapted to the efficient dissemination thereof; and except where such powers and duties are by law conferred or laid upon other boards, commissions, or officials, the State Board of Agriculture shall have general supervision, direction, and control of the herein recited matters, and generally of all matters in any way affecting or relating to the fostering, protection, and development of the agricultural interests of the State, including the encouragement of desirable immigration thereto, with power and authority to issue rules and regulations in respect thereof not in conflict with the Constitution and Laws of the State or the United States, which shall have the force and effect of law, and all violations of which shall be punished as misdemeanors are punished at common law; and where such powers and duties are by law conferred or laid on other governmental agencies may co-operate in the execution and performance thereof, and when so co-operating each shall be vested with such authority as is now or may hereafter by law be conferred on the other. The powers and duties herein recited shall be in addition to and not in limitation of any power and duties which now are or hereafter may be conferred or laid upon said board."

Under the above authority and by special legislation, all regulatory work is conducted under the general authority of the State Board. This includes the following services:

LIVE STOCK SANITARY SERVICE

JAMES B. GEORGE, *Director*.

816 Fidelity Building, Baltimore, Maryland.

This service has charge of the regulatory work in connection with the control of disease among animals. It is authorized by law to control outbreaks of rabies, anthrax, blackleg, scabies, Johne's disease, contagious abortion, etc. This service is also charged, in co-operation with the U. S. Bureau of Animal Industry, with the eradication of bovine tuberculosis. The hog cholera control work, which is conducted in co-operation with federal authorities, is also conducted under the general jurisdiction of this service. Much of the laboratory work necessary in conjunction with the identification of disease among animals is done in the University laboratories at College Park.

STATE HORTICULTURAL DEPARTMENT

College Park, Maryland.

The State Horticultural Law was enacted in 1898. It provides for the inspection of all nurseries and the suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Pathology of the University. The regulatory work is conducted under the authority of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University on account of the close association of the work. The officers of the department are:

E. N. Cory, State Entomologist
C. E. Temple, State Pathologist
T. B. Symons, Director of the Extension Service

FEED, FERTILIZER, AND LIME INSPECTION SERVICE

College Park, Maryland.

The Feed, Fertilizer, and Lime Inspection Service, a branch of the chemical department of the University, is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. This work is conducted under the general direction of the chemical department in charge of Dr. L. B. Broughton.

SEED INSPECTION SERVICE

College Park, Maryland

The Seed Inspection Service is placed by law under the general supervision of the Maryland Experiment Station. This service takes samples of seed offered for sale, and tests them for quality and germination. Mr. F. S. Holmes is in immediate charge of the seed work, with Dr. H. J. Patterson, Director of the Experiment Station.

ASSOCIATED STATE DEPARTMENTS

STATE DEPARTMENT OF FORESTRY

The Department of Forestry was created and organized to protect and develop the valuable timber and tree products of the State, to carry on a campaign of education, and to instruct counties, towns, corporations, and individuals as to the advantages and necessity of protecting from fire and other enemies the timber lands of the State. While the power of the Forestry Department rests with the Regents of the University, acting through the Advisory Board, the detail work is in the hands and under the management of the State Forester, who is secretary of the Board; and all correspondence and inquiries should be addressed to him at 1411 Fidelity Building, Baltimore.

Scientific Staff:

F. W. Besley, State Forester.....Baltimore
Karl E. Pfeiffer, Assistant State Forester.....Baltimore
John R. Curry, Assistant Forester.....Baltimore
Fred B. Trenk, Assistant Forester.....College Park

Studies have been made of the timber interests of each of the twenty-three counties; and the statistics and information collected are published for free distribution, accompanied by a valuable timber map. The Department also administers six state forests, comprising about 5,000 acres. The Roadside Tree Law directs the Department of Forestry to care for those trees growing within the right-of-way of any public highway in the State. A State forest nursery, established in 1914 and located at College Park, is under the jurisdiction of this Department.

STATE WEATHER SERVICE

The State Weather Service continues its work of compilation of local statistics regarding climatic conditions and in the dissemination of information regarding the climatology of Maryland under the Regents of the University of Maryland through the State Geologist as successor to the Maryland State Weather Service Commission. The State Geologist is ex-officio Director, performing all the functions of former officers with the exception of Meteorologist, who is commissioned by the Governor and serves as liaison officer with the United States Weather Bureau. All activities except clerical are performed voluntarily. The officers are:

Edward B. Mathews, Director.....Baltimore
Roscoe Nunn, Meteorologist, U. S. Custom House.....Baltimore

THE STATE GEOLOGICAL AND ECONOMIC SURVEY

The Geological and Economic Survey Commission is authorized under the general jurisdiction of the Board of Regents of the University of Maryland

to conduct the work of this department. The State Geological and Economic Survey is authorized to make:

Topographic surveys showing the relief of the land, streams, roads, railways, houses, etc.

Geological surveys showing the distribution of the geological formations and mineral deposits of the State.

Agricultural soil surveys showing the areal extent and character of the different soils.

Hydrographic surveys to determine the available waters of the State for potable and industrial uses.

Magnetic surveys to determine the variation of the needle for land surveys.

A permanent exhibit of the mineral wealth of the State in the old Hall of Delegates at the State House, to which new materials are constantly added to keep the collection up-to-date.

The following is the staff of the Survey:

Edward B. Mathews, State Geologist.....	Baltimore
Edward W. Berry, Assistant State Geologist.....	Baltimore
Charles K. Swartz, Geologist.....	Baltimore
Joseph T. Singewald, Jr., Geologist.....	Baltimore
Myra Ale, Secretary.....	Baltimore
Grace E. Reed, Librarian.....	Baltimore
Eugene H. Sapp, Clerk.....	Baltimore

SECTION III. Description Of Courses

The courses of instruction described in this section are offered at College Park. Those offered in the Baltimore Schools are described in the separate announcements issued by the several schools.

For the convenience of students in making out schedules of studies, the subjects in the following Description of Courses are arranged alphabetically:

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Courses for undergraduates are designated by the numbers 1-99; courses for advanced undergraduates and graduates, 100-199; courses for graduate students, 200-299.

The letter following the number of the course indicates the semester in which the course is offered: thus, 1 f is offered the first semester; 1 s, the second semester; 1 y, the year. A capital S after a course number indicates that the course is offered in the summer session only.

The number of hours' credit is shown by the arabic numeral in parenthesis after the title of the course.

A separate schedule of courses is issued each semester, giving the hours, places of meeting, and other information required by the student in making out his schedule. Students will obtain these schedules when they register.

Students are advised to consult the statements of the colleges and schools in Section II when making out their programs of studies; also "Regulation of Studies," Section I.

AGRICULTURAL ECONOMICS

PROFESSOR DEVAULT; ASSISTANT PROFESSOR BENNETT.

A. E. 1 f. *Agricultural Industry and Resources* (3)—Two lectures; one laboratory. Open to Sophomores.

A descriptive course dealing with agriculture as an industry and its relation to physiography, movement of population, commercial development, transportation, etc.; the existing agricultural resources of the world and their potentialities, commercial importance, and geographical distribution; the chief sources of consumption; the leading trade routes and markets for agricultural products.

A. E. 2 f. *Agricultural Economics* (3)—Three lectures. Prerequisite, Econ. 3 s.

A general course in Agricultural Economics, with special reference to population trend, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing and co-operation.

A. E. 3 s. *Advertising Agricultural Products* (3)—Three lectures.

Methods of giving publicity to agricultural products held for sale, naming the farm, advertising mediums; trade marks and slogans, roadside markets, demand vs. competition, legal aspects of advertising, advertising costs and advertising campaigns. (not given in 1929-1930.)

A. E. 8 s. *Food Products Inspection* (1).

This course, arranged by the Department of Agricultural Economics in co-operation with the State Department of Markets and the United States Department of Agriculture, is designed to give students primary instruction in shipping point inspection of fruits and vegetables. As a part of the work it is planned to give each student an opportunity to participate in the actual inspection of car-lots of fruits and vegetables in Washington, D. C. Students are not guaranteed employment, but when there is need for the appointment of additional inspectors, such students as have made satisfactory ratings will be given preference.

For Advanced Undergraduates and Graduates

A. E. 101 s. *Transportation of Farm Products* (3)—Three lectures.

A study of the development of transportation in the United States, the different agencies for transporting farm products, with special attention to such problems as tariffs, rate structure, and the development of fast freight lines, refrigerator service, etc. (Bennett.)

A. E. 102 s. *Marketing of Farm Products* (3)—Three lectures. Prerequisite, Econ. 3 s.

A complete analysis of the present system of transporting, storing, and distributing farm products and a basis for intelligent direction of effort in increasing the efficiency of marketing methods. (DeVault.)

A. E. 103 f. *Co-operation in Agriculture* (3)—Three lectures. Prerequisite, Econ. 3 s.

Historical and comparative development of farmers' co-operative organizations; reasons for failure and essentials to success; present tendencies. (Bennett.)

A. E. 104 s. *Agricultural Finance* (3)—Three lectures *Agricultural Credit* requirements; institutions financing agriculture; financing specific farm organizations and industries. *Taxation* of various farm properties; burden of taxation on different industries; methods of taxation; proposals for tax reform. *Farm insurance*—fire, crop, livestock, and life insurance—how provided, benefits, and needed extension. (Given in 1929-1930.) (Bennett.)

A. E. 105 y. *Seminar* (1-3).

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and the instructor. (DeVault.)

A. E. 106 y. *Research Problems* (1-3).

With the permission of the instructor, students will work on any research problems in agricultural economics which they may choose, or a special list of subjects will be made up from which the students may select their research problems. There will be occasional class meetings for the purpose of making reports on progress of work, methods of approach, etc. (DeVault.)

For Graduates

A. E. 201 y. *Special Problems in Agricultural Economics* (3).

An advanced course dealing more extensively with some of the economic problems affecting the farmer; such as land problems, agricultural finance, farm wealth, agricultural prices, transportation, and special problems in marketing and co-operation. (DeVault.)

A. E. 202 y. *Research and Thesis* (8)—Students will be assigned research work in Agricultural Economics under the supervision of the instructor. The work will consist of original investigation in problems of Agricultural Economics, and the results will be presented in the form of a thesis. (De Vault.)

AGRICULTURAL EDUCATION AND RURAL LIFE

PROFESSORS COTTERMAN, CARPENTER; MR. WORTHINGTON.

For Advanced Undergraduates and Graduates

AG. ED. 100 s. *Survey of Teaching Methods for Agricultural Students* (3)—Two lectures; one laboratory. Open to juniors and seniors; required of juniors in Agricultural Education. Prerequisite, Ed. 101. Cannot be counted toward major for advanced degree in Agricultural Education.

The nature of educational objectives, the class period, steps of the lesson plan, observation and critiques, type lessons, lesson planning, class management. (Cotterman.)

AG. ED. 101 y. *Teaching Secondary Vocational Agriculture* (8)—Three lectures; one laboratory the first semester. One seminar period and practicum work to be arranged the second semester. Practicum work may be arranged during the first semester. Prerequisites, Ag. Ed. 100; A. H. 1, 2; Dairy 1; Poultry 1; Soils 1; Agronomy 1, 2; Hort. 1, 11; F. Mech. 101, 104; A. E. 1; F. M. 2. Cannot be counted toward major for advanced degree in Agricultural Education.

Types of schools and classes; administrative programs; qualifications of teachers; day class instruction—objectives, selection of projects, project instruction, selection of content for group instruction, methods of class period;

evening class instruction; part-time class instruction; equipment and other administrative problems; unit courses; student projects; investigations; reports. (Cotterman.)

AG. ED. 102 s. *Rural Life and Education* (3)—Three lectures.

Ancient and foreign rural communities; evolution of American rural communities; rural social institutions; social and cultural measurements, standards of living; the analysis of rural communities; community and educational programs; problems in leadership; investigations; reports. This course is designed especially for persons who expect to be called upon to assist in shaping educational and other community programs for rural people. (Cotterman.)

AG. ED. 103 s. *Objectives and Methods in Extension Education* (2-3). Two lectures.

Given under the supervision of the Extension Service, and designed to equip young men to enter the broad field of extension work. Methods of assembling and disseminating the agricultural information available for the practical farmer; administration, organization, supervision, and practical details connected with the work of a county agent, with club work and the duties of an extension specialist. Students will be required to gain experience under the guidance of men experienced in the respective fields. Traveling expenses for this course will be adjusted according to circumstances, the ability of the man, and the service rendered. (Cotterman and Extension Specialists.)

AG. ED. 104 s. *Teaching Farm Shop in Secondary Schools* (1)—One lecture.

Objectives in the teaching of farm shop; contemporary developments; determination of projects; shop management; shop programs; methods of teaching; equipment; materials of instruction; special projects. (Carpenter.)

AG. ED. 105 f. *School and Rural Community Surveys* (2-5)—Credits determined by amount and character of work done. Two lectures.

The function of survey; typical surveys, their purposes and findings; types of surveys; sources of information; preparation of schedules; collection, tabulation, and interpretation of data. (Cotterman.)

For Graduates

AG. ED. 201 S. *Special Problems in the Teaching of Vocational Agriculture* (3)—Summer Session only. Prerequisite, Ag. Ed. 101.

Analysis of the work of the supervisor; supervisory programs; policies; problems; contemporary developments; principles of supervision; investigations; reports. (Cotterman.)

AG. ED. 202 S. *Supervision of Vocational Agriculture* (3)—Summer session only. Prerequisite, Ag. Ed. 101.

Analysis of the work of the supervisor; supervisory programs; policies; problems; contemporary developments; principles of supervision; investigations; reports. (Cotterman.)

AG. ED. 204 s. *Seminar in Agricultural Education* (3).

Problems in the administration and organization of Agricultural Education—prevocational, secondary, collegiate, and extension; individual problems and papers; current literature. (Cotterman.)

*ED. 202 f. *College Teaching* (3).

*ED. 203 s. *Problems in Higher Education* (3.)

AGRONOMY

Division of Crops

PROFESSORS METZGER, KEMP; ASSISTANT PROFESSOR EPPLEY.

AGRON. 1 f. *Cereal Crop Production* (3)—Two lectures; one laboratory. History, distribution, adaptation, culture, improvement, and uses of cereal, forage, pasture, cover, and green manure crops.

AGRON. 2 s. *Forage Crop Production* (3)—Two lectures; one laboratory. Continuation of Agron. 1 f.

AGRON. 3 s. *Grading Farm Crops* (2)—One lecture; one laboratory. Prerequisites, Agron. 1 and 2.

Market classifications and grades as recommended by the United States Bureau of Markets, and practice in determining the grades.

AGRON. 4 f. *Grain and Hay Judging, Identification and Judging of Farm Crops* (1)—One laboratory. Prerequisites, Agron. 1 and 2.

A study of the classification of farm crops; practice in judging the cereals for milling, seeding, and feeding purposes; and practice in judging hay.

AGRON. 5 s. *Tobacco Production* (2)—One lecture; one laboratory. Offered only in even years, 1930, 1932, etc.

This course takes up in detail the handling of the crop from preparation of the plant bed through marketing, giving special attention to Maryland types of tobacco.

For Advanced Undergraduates and Graduates

AGRON. 103 f. *Crop Breeding* (2)—One lecture; one laboratory. Prerequisite, Gen. 101.

The principles of breeding as applied to field crops and methods used in crop improvement. (Kemp.)

* See courses under Education, page 181.

AGRON. 120 s. *Cropping Systems and Methods* (2)—Two lectures. Prerequisites, Agron. 1 and Soils 1.

Principles and factors influencing cropping systems in the United States; study of rotation experiments; theories of cropping methods; and practice in arranging type farming systems. (Metzger.)

AGRON. 121 s. *Methods of Crop and Soil Investigations* (2)—One lecture; one laboratory.

A consideration of crop investigation methods at the various experiment stations, and the standardization of such methods. Not offered in 1929-1930. (Metzger.)

For Graduates

AGRON. 201 y. *Crop Breeding*—Credits determined by work accomplished. The content of this course is similar to that of Agron. 103, but will be adapted more to graduate students, and more of a range will be allowed in choice of material to suit special cases. (Kemp.)

AGRON. 203 y. *Seminar* (2)—One report period each week.

The seminar is devoted largely to reports by students on current scientific publications dealing with problems in crops and soils.

AGRON. 209 y. *Research*—Credit determined by work accomplished.

With the approval of the head of the department the student will be allowed to work on any problem in agronomy, or he will be given a list of suggested problems from which he may make a selection. (Staff.)

Division of Soils

PROFESSOR BRUCE, ASSISTANT PROFESSOR THOMAS.

SOILS 1 s. *Principles of Soil Management* (3)—Two lectures; one quiz; one laboratory. Prerequisite, Geol. 1.

A study of the physical, chemical, and biological principles underlying the formation and management of soils. The relation of mechanical composition, classification, moisture, temperature, air, organic matter, and tillage are considered. The use and value of commercial plant nutrients, green and stable manure, and lime are discussed.

SOILS 2 f. *Fertilizers and Manures* (3)—Two lectures; one laboratory. Prerequisite, Soils 1.

This course includes a study of the nature, properties, and use of fertilizers; the source and composition of fertilizer materials; and the principles underlying the mixing of commercial plant-food. A study is made of the production, value, and uses of animal and vegetable manures. The practical work includes special studies of the effect of fertilizers and manures on the crop-producing power of the various soil types.

SOILS 3 s. *Soil Fertility* (3)—Two lectures; one laboratory. Prerequisite, Soils 1.

A study of the soil fertility systems of the United States, with special emphasis on the inter-relation of total to available plant food, the balance

of nutrients in the soil with reference to various cropping systems, and the economic and national aspect of permanent soil improvement. The practical work includes a resume of the important fertility studies and laboratory and greenhouse practice in soil improvement.

SOILS 5 f. *Soil Surveying and Classification* (3)—Two lectures; one laboratory. Prerequisite, Soils 1.

A study of the principal soil regions, series, and types of the United States, and especially of the soils of Maryland, as to formation, composition, and agricultural value. The practical work includes a field survey, identification of soil types, and map-making.

For Graduate Students

SOILS 104 s. *Soil Micro-Biology* (3)—Two lectures; one laboratory. Prerequisite, Bact. 1.

A study of the micro-organisms of the soil in relation to fertility. It includes the study of the bacteria of the soil concerned in the decomposition of organic matter, nitrogen fixation, nitrification, and sulphur oxidation and reduction, and deals also with such organisms as fungi, algae, and protozoa.

The course includes a critical study of the methods used by Experiment Stations in soil investigational work. (Thomas.)

SOILS 201 y. *Special Problems and Research* (10-12).

Original investigation of problems in soils and fertilizers. (Staff.)

SOILS 202 y. *Soil Technology* (7-3 f, 4 s)—Two lectures; one laboratory first semester; two lectures; two laboratories second semester. Prerequisites, Geology 1, Soils 1, and Chemistry 1.

In the first semester chemical and physico-chemical study of soil problems as encountered in field, greenhouse, and laboratory. In the second semester physical and plant nutritional problems related to the soil. (Thomas.)

ANIMAL HUSBANDRY

PROFESSOR MEADE; ASSISTANT PROFESSOR HUNT.

A. H. 1 f. *General Animal Husbandry* (3)—Two lectures; one laboratory.

Place of livestock in the farm organization. General principles underlying efficient livestock management. Brief survey of breeds, types, and market classes of livestock, together with an insight into our meat supply.

A. H. 2 f. *Feeds and Feeding* (3)—Two lectures; one laboratory.

Elements of nutrition, source, characteristics, and adaptability of the various feeds to the several classes of livestock. Feeding standards, the calculation and compounding of rations.

A. H. 3 s. *Principles of Breeding* (3)—Two lectures; one laboratory.

This course covers the practical aspects of animal breeding, including heredity, variation, selection, development, systems of breeding, and pedigree work.

A. H. 4 s. *Swine Production* (3)—Two lectures; one laboratory. Not offered in 1929-1930.

The care, feeding, breeding, management, and judging of swine, and the economics of the swine industry.

A. H. 5 f. *Beef Production* (2)—Two lectures; one laboratory.

The care, feeding, breeding, management of beef herds; fattening; and the economics of the beef industry.

A. H. 6 s. *Horse and Mule Production* (2)—One lecture; one laboratory. Not offered in 1929-1930.

The care, feeding, breeding, and management of horses. Market classes and grades and judging.

A. H. 7 s. *Sheep Production* (3)—Two lectures; one laboratory.

Care, feeding, breeding, and management of the farm flock. Judging of sheep and the grading of wool.

A. H. 8 f. *Meat and Meat Products* (2)—Two laboratories.

The slaughtering of meat animals and the production, preparation, and curing of meat and meat products.

A. H. 9-10 y. *Advanced Judging* (2)—One laboratory.

First Semester—The comparative and competitive judging of sheep and swine.

Second Semester—The comparative and competitive judging of horses and beef cattle. Trips to various stock farms throughout the state will be made. Such judging teams as may be chosen to represent the university will be selected from among those taking this course. Not offered in 1929-1930.

A. H. 11 s. *Markets and Marketing* (3)—Two lectures; one laboratory.

History and development, organization and status of the meat, wool, and horse industries. Market classes and grades of livestock. American livestock markets and how they function.

A. H. 12 y. *Research and Thesis* (4-6).

Work to be done by assignment and under supervision. Original investigation in problems in animal husbandry, the results of which research are to be presented in the form of a thesis, a copy of which must be filed in the department library.

For Advanced Undergraduates and Graduates

A. H. 101 s. *Nutrition* (3)—Two lectures; one laboratory. Senior year.

A study of digestion, assimilation, metabolism, and protein and energy requirements. Methods of investigation and studies in the utilization of feed and nutrients. (Meade.)

A. H. 102 y. *Seminar* (2)—One lecture. Senior and graduate students only. Students are required to prepare papers based upon current scientific publications relating to animal husbandry or upon their research work for presentation before and discussion by the class. (Staff.)

For Graduates

A. H. 201 y. *Research*—Credit to be determined by the amount and character of work done. With the approval of the head of the department, students will be required to pursue original research in some phase of animal husbandry, carry the same to completion, and report the results in the form of a thesis. (Staff.)

ASTRONOMY

PROFESSOR T. H. TALIAFERRO.

ASTR. 1 s. *Astronomy* (3)—Three lectures. Elective.

An elementary course in descriptive astronomy. Open only to juniors and seniors.

BACTERIOLOGY

PROFESSORS PICKENS, REED; ASSISTANT PROFESSORS WELSH, POELMA;

MR. FABER, MR. STRAKA.

BACT. 1 f. or s. *General Bacteriology* (3)—Repeated second semester. One lecture; two laboratories. Sophomores.

A brief history of bacteriology; microscopy, bacteria and their relation to nature; morphology, classification; preparation of cultural media; sterilization and disinfection; microscopic and macroscopic examination of bacteria; classification, composition, and uses of stains; isolation, cultivation, and identification of aerobic and anaerobic bacteria; vital activities of bacteria.

BACT. 2 s. *General Bacteriology* (3)—One lecture; two laboratories.

Continuation of Bact. 1. Application of Bacteriology to water, milk, foods, soil, and air; Pathogens and Immunity.

BACT. 3 s. *Household Bacteriology* (3)—One lecture; two laboratories. Junior year.

A brief history of bacteriology, laboratory technique; care, preservation, and contamination of foods: Personal, home, and community hygiene.

BACT. 4 s. *Sanitary Bacteriology* (1)—One lecture. Senior year, for engineering students.

Application to water purification and sewage disposal.

For Advanced Undergraduates and Graduates

BACT. 101 y. *Dairy Bacteriology* (6)—One lecture; two laboratories. Juniors. Prerequisite, Bact. 1.

Historical sketch; relation of bacteria to dairy products; preparation of media; plating by dilution method; direct microscopic examination; kinds of bacteria in milk, and their development; pasteurization, by flash and hold methods; sources of contamination of milk; care of milk; abnormal milks; tests, and their relation to bacteria counts; fermented milks; bacteriological analysis of standard grades of milk and milk products; preparation of starters; requirements and standards for various grades of milk; public health requirements. (Poelma.)

BACT. 102 y. *Advanced Bacteriology* (3-10)—Juniors and seniors. Prerequisite, Bact. 1.

This course is intended primarily to give the student a chance to develop his own initiative. He will be allowed to decide upon his project and work it out as much as possible in his own way under proper supervision. In this manner he will be able to apply his knowledge of bacteriology to a given problem in that particular field in which he is interested. He will get to know something of the methods of research. Familiarity with library practices and current literature will be included. (Pickens.)

BACT. 103 s. *Hematology* (2)—Senior year. Prerequisite, Bact. 1.

Procuring blood; estimating the amount of hemoglobin; color index; examination of red cells and leucocytes in fresh and stained preparations; numerical count of erythrocytes and leucocytes; differential count of leucocytes; sources and development of the formed elements of blood; pathological forms and counts. (Straka.)

BACT. 104 f. *Serology* (2-3)—Junior or Senior year. Prerequisite, Bact. 2.

The theory and application of several serological tests, including the Complement Fixation Reaction. (Poelma.)

BACT. 105 f. *Pathological Technique* (3)—Junior or Senior year. Prerequisite, Bact. 1.

Examination of fresh material; free hand sections; fixation; frozen sections; decalcification; celloidin and paraffin imbedding processes; sectioning; general and special standing processes. (Reed.)

BACT. 106 f. *Comparative Anatomy and Physiology* (3)—Three lectures. Junior year.

Structure of the animal body; abnormal as contrasted with normal. The interrelationship between the various organs and parts as to structure and function. (Reed.)

BACT. 107 s. *Urinalysis* (2)—Junior or Senior year. Prerequisite, Bact. 1. (Reed.)

BACT. 108 s. *Animal Hygiene* (3)—Three lectures or demonstrations. Senior year.

Care and management of domestic animals, with special reference to maintenance of health and resistance to disease. Prevention and early recognition of disease; general hygiene; sanitation; first aid. (Reed.)

BACT. 109 y. *Thesis* (4)—Senior year. Prerequisites, Bact. 1 and at least one of the advanced courses.

Investigation of given project, results of which are to be presented in the form of a thesis and submitted for credit toward graduation. (Pickens.)

BACT. 110 y. *Seminar* (2)—Senior year.

The work will consist of making reports on individual projects and on recent scientific literature. (Pickens and Staff.)

BACT. 111 s. *Public Health* (1)—One lecture. Junior or Senior year. Prerequisite, Bact. 1.

A series of weekly lectures on Public Health and its Administration, by the Experts of the Maryland State Board of Health. (Pickens, In Charge.)

For Graduates

BACT. 201 y. *Research Bacteriology* (4-12.)—Prerequisites, Bact. 1 and in certain cases, Bact. 103, depending upon the project. (Pickens.)

BACT. 202 y. *Research in Genital Diseases of Farm Animals*. Prerequisite, Degree in Veterinary Medicine, from an approved Veterinary College. Laboratory and field work by assignment. (Reed.)

BOTANY

PROFESSORS NORTON, TEMPLE.

(For other Botanical Courses see Plant Physiology and Plant Pathology.)

BOT. 1 f or s. *General Botany* (4)—Two lectures; two laboratories.

General introduction to botany, touching briefly on all phases of the subject and planned to give the fundamental prerequisites for study in the special departments.

BOT. 2 s. *General Botany* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1.

A study of algae, bacteria, fungi, liverworts, mosses, ferns, and seed plants. The development of reproduction from the simplest form to the most complex; adjustment of plants to the land habit of growth; field trips to study the local vegetation; trips to the botanical gardens, parks, and greenhouses in Washington to study other plants of special interest. A cultural course intended also as foundational to a career in the plant sciences. (Temple.)

BOT. 3 s. *Systematic Botany* (2)—One lecture; one laboratory.

A study of the local flora and cultivated plants of the campus. A study is made of floral parts and the essential relations between the groups of flowering plants. Students become familiar with the systematic key used to identify plants. Not offered in 1929-1930. (Norton.)

BOT. 4 s. *General Mycology* (2)—One lecture; one laboratory.

Introductory comparative study of the morphology, life history, and classification of economic fungi. Not offered in 1929-1930. (Norton.)

BOT. 5 S. *General Botany* (4)—The same as Botany 1, but offered in the Summer School. Thirty lectures and thirty laboratories.

For Advanced Undergraduates and Graduates

BOT. 101 f. *Plant Anatomy* (3)—One lecture; two laboratories. Not offered in 1930-1931.

A study of the structures of roots, stems, leaves, flowers, and fruits; the origin and development of organs and tissue systems in vascular plants. (Temple.)

BOT. 102 s. *Methods in Plant Histology* (3)—One lecture; two laboratories. Prerequisite, Bot. 1. Not offered in 1929-1930.

Primarily a study in technique. It includes methods of the killing, fixing, imbedding, sectioning, staining, and mounting of plant materials. (Temple.)

BOT. 103 f or s. *Advanced Taxonomy* (3)—One lecture; two laboratories. Prerequisite, Bot. 1. Not offered in 1930-1931.

The course is offered for students who want more proficiency in systematic botany than the elementary course affords. A student who completes the course should be able to classify the grasses and other common plants of the state. (Norton.)

BOT. 105 s. *Economic Plants* (2)—One lecture; one laboratory.

The names, taxonomic position, native and commercial geographic distribution, and use of the leading economic plants of the world are studied. By examination of plant products in markets, stores, factories, and gardens, students become familiar with the useful plants both in the natural form and as used by man. Not offered in 1929-1930. (Norton.)

BOT. 106 f. *History and Philosophy of Botany* (1)—One lecture. Not offered in 1930-1931.

Discussion of the development of the ideas and knowledge about plants. (Norton.)

For Graduates

BOT. 202. *Special Studies of Fungi*—Credit hours according to work done. Prerequisite, Bot. 103.

Special problems in the structure or life history of fungi or the monographic study of some group of fungi. (Norton.)

BOT. 203. *Special Plant Taxonomy*—Credit hours according to work done. Prerequisite, Bot. 103.

Original studies in the taxonomy of some group of plants. (Norton.)

CHEMISTRY

PROFESSORS BROUGHTON, DRAKE;

ASSOCIATE PROFESSORS HARING, WILEY;

ASSISTANT PROFESSOR WHITE; ASSISTANTS COOKE, KAVELER.

A. General Chemistry

CHEM. 1 A y. *General Chemistry and Qualitative Analysis* (8)—Two lectures; two laboratories.

A study of the non-metals and metals, the latter being studied from a qualitative standpoint. One of the main purposes of the course is to develop original work, clear thinking, and keen observation. This is accomplished by the unit-study method of teaching.

Course A is intended for students who have never studied chemistry, or have passed their high-school chemistry with a grade of less than B.

CHEM. 1 B y. *General Chemistry and Qualitative Analysis* (8)—Two lectures; two laboratories.

This course covers much the same ground as Chemistry 1 A y, except that the subject matter is taken up in more detail with emphasis on chemical theory and important generalization. The laboratory work deals with fundamental principles, the preparation and purification of compounds, and a systematic qualitative analysis of the more common metals and acid radicals.

Course B is intended for students who have passed an approved high-school chemistry course, with a grade of not less than B.

CHEM. 2 y. *Qualitative Analysis* (8)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

A study of the reactions of the common metals and the acid radicals, their separation and identification, and the general underlying principles. During the second semester, the nature, preparation, and behavior of colloidal substances are studied.

For Advanced Undergraduates and Graduates

CHEM. 100 y. *Advanced Inorganic Chemistry* (6)—Two lectures; one laboratory. Prerequisite, Chem. 6 y.

A study of the rarer elements is made by comparing their properties with those of the more common elements. The course is based upon the periodic system, the electromotive series, and the electronic structure of matter. The laboratory is devoted to the preparation of pure, inorganic substances. (White.)

For Graduates

CHEM. 201 y. *Research In Inorganic Chemistry* (12)—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (White.)

B. Analytical Chemistry

CHEM. 4 f and s. *Quantitative Analysis* (4)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

Quantitative analysis for pre-medical students with special reference to volumetric methods.

CHEM. 5 y. *Determinative Mineralogy and Assaying* (4)—One lecture and one laboratory period. Prerequisite, Chem. 1 y.

The more important minerals are identified by their characteristic physical and chemical properties. Assays of gold, silver, copper, and lead are made.

CHEM. 6 y. *Quantitative Analysis* (10)—Two lectures; three laboratory periods. Prerequisite, Chem. 1 y.

The principal operations of gravimetric analysis. Standardization of weights and apparatus used in chemical analysis. The principal operations of volumetric analysis. Study of indicators, typical volumetric and colorimetric methods. The calculations of volumetric and gravimetric analysis are emphasized, as well as calculations relating to common ion effect. Required of all students whose major is chemistry.

CHEM. 7 y. *Analytical Chemistry* (10)—Two lectures and three laboratory periods. Prerequisite, Chem. 1 y.

This course includes the principal theories and operations of both qualitative and quantitative analysis. It is especially designed for industrial chemistry students.

For Advanced Undergraduates and Graduates

CHEM 101 y. *Advanced Quantitative Analysis* (10)—Two lectures; three laboratories each semester.

A broad survey of the field of inorganic quantitative analysis. In the first semester mineral analysis will be given. Included in this will be analysis of silicates, carbonates, etc. In the second semester the analysis of steel and iron will be taken up. However, the student will be given wide latitude as to the type of quantitative analysis he wishes to pursue during the second semester. Prerequisite, Chem. 6 or its equivalent. (Wiley.)

CHEM. 202 y. *Research in Quantitative Analysis* (12)—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (Wiley.)

C. Organic Chemistry

Laboratory work in any of the courses in organic chemistry may be carried out at any time between the hours of 8.20 and 4.20.

CHEM. 8 f or s. *Elementary Organic Chemistry* (5)—Three lectures; two laboratories. Prerequisite, Chem. 1 y.

The course includes an elementary study of the fundamentals of organic chemistry, and is designed to meet the needs of students specializing in chemistry and pre-medical students.

For Advanced Undergraduates and Graduates

CHEM. 116 y. *Advanced Organic Chemistry* (8)—Two lectures; two laboratories. Prerequisite, Chem. 8 f or s or its equivalent.

This course is devoted to a more advanced study of the compounds of carbon than is undertaken in Chem. 8 f or s. The laboratory work includes quantitative determinations of halogen, nitrogen, carbon, and hydrogen in organic substances, and also preparation work more difficult than that encountered in the elementary course. Required of students specializing in chemistry. Course 116 y may be taken without the laboratory work. (Drake.)

For Graduates

CHEM. 203 f or s. *Special Topics in Organic Chemistry* (2)—A lecture course which will be given any half-year when there is sufficient demand. The course will be devoted to an advanced study of topics which are too specialized to be considered in Chem. 116 y. Topics that may be covered are dyes, drugs, carbohydrates, plant pigments, etc. The subject-matter will be varied to best suit the needs of the particular group enrolled. (Drake.)

CHEM. 205 f or s. *Organic Preparations* (4)—A laboratory course, devoted to the synthesis of various organic compounds. This course is designed to fit the needs of those students whose laboratory experience has been insufficient for research in organic chemistry. (Drake.)

CHEM. 210. *Research in Organic Chemistry* (12)—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (Drake.)

D. Physical Chemistry

CHEM. 10 y. *Elementary Physical Chemistry* (6)—Two lectures; one laboratory period. Prerequisites, Chem. 1 y; Physics 1 y; Math. 3 y.

This course, designed particularly for those unable to pursue the subject further, reviews the more theoretical points of inorganic chemistry from an advanced standpoint and lays a good foundation for more advanced work in physical chemistry.

For Advanced Undergraduates and Graduates

CHEM. 102 y. *Physical Chemistry* (10)—Three lectures; two laboratory periods. Prerequisites, Chem. 6 y; Physics 2 y; Math. 6 s. One term may be taken for graduate credit.

This course aims to furnish the student with a thorough background in the laws and theories of chemistry. The gas laws, kinetic theory, liquids, solutions, elementary thermodynamics, thermochemistry, equilibrium, chemical kinetics, etc. (Haring.)

For Graduates

Note: CHEM. 102 y or its equivalent is prerequisite for all advanced courses in physical chemistry.

CHEM. 212 y. *Colloid Chemistry* (8) or (4)—Two lectures; two laboratory periods: or two lectures only.

This is a thorough course in the chemistry of matter associated with surface energy. (Haring.)

CHEM. 213 f. *Phase Rule* (2)—Two lectures. (Not given 1929-1930.)

A systematic study of heterogeneous equilibria. One, two, and three component systems will be considered with practical applications of each. (Haring.)

CHEM. 214 s. *Structure of Matter* (2)—Two lectures. (Not given 1929-1930.)

Subjects considered will be radioactivity, isotopes, the Bohr and Lewis-Langmuir theories of atomic structure, and allied topics. (Haring.)

CHEM. 215 f. *Catalysis* (2)—Two lectures. (Not given 1929-1930.)

This course consists of lectures on the theory and applications of catalysis. (Haring.)

CHEM. 216 s. *Theory of Solutions* (2)—Two lectures. (Not given 1929-1930.)

A detailed study will be made of the modern theory of ideal solutions, of the theory of electrolytic dissociation and of the recent developments of the latter. (Haring.)

CHEM. 217 y. *Electrochemistry* (8) or (4)—Two lectures; two laboratory periods; or two lectures only. (Not given 1929-1930.)

A study of the principles and some of the practical applications of electrochemistry. (Haring.)

CHEM. 218 y. *Chemical Thermodynamics* (4)—Two lectures.

A study of the methods of approaching chemical problems through the laws of energy. It is mathematical in character.

CHEM. 219 y. *Research in Physical Chemistry* (12)—Open to students working for the higher degrees. Prerequisites, a bachelor's degree in chemistry or its equivalent. Consent of the instructor. (Haring.)

E. Agricultural Chemistry

CHEM. 12 f. *Elements of Organic Chemistry* (4)—Three lectures; one laboratory. Prerequisite, Chem. 1 y.

The chemistry of carbon and its compounds. This course is particularly designed for students in Agriculture and Home Economics.

CHEM. 13 s. *Agricultural Chemical Analysis* (3)—One lecture; two laboratories. Prerequisite, Chem. 1 y.

An introductory course in the analysis of agricultural products with special reference to the analysis of feeding stuffs, soils, fertilizers, and insecticides.

CHEM. 14 f. *Chemistry of Foods* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f.

The purpose of this course is to present the principles of chemistry as applied to foods and nutrition with especial reference to the fats, carbohydrates, proteins, enzymes, etc.

CHEM. 15 s. *Chemistry of Textiles* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f.

A study of the principal textile fibres, their chemical and mechanical structure. Chemical methods are given for identifying the various fibres and for a study of dyes and mordants.

For Advanced Undergraduates and Graduates

CHEM. 104 f or s. *General Physiological Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f or its equivalent.

A study of the chemistry of the fats, carbohydrates, proteins, and other compounds of biological importance. This course is intended for students majoring in biological subjects, and as a prerequisite to certain advanced courses in this department. (Broughton.)

CHEM. 106 f or s. *Dairy Chemistry* (4)—One lecture; three laboratories. Prerequisite, Chem. 12 f.

Lectures and assigned reading on the constituents of dairy products. This course is designed to give the student a working knowledge and laboratory practice in dairy chemistry and analysis. Practice is given in examining dairy products for confirmation under the food laws, detection

of watering, detection of preservatives and added colors, and the detection of adulterants. Students showing sufficient progress may take the second semester's work, and elect to isolate and make complete analysis of the fat or protein of milk. (Broughton.)

CHEM. 108 s. *Chemistry of Nutrition* (4)—Two lectures; two laboratories. Prerequisite, Chemistry 104 f or its equivalent.

Lectures on the chemistry of nutrition, laboratory determination of fuel value of food and the heat production of man under various conditions, metabolism, the effects on small animals of diets consisting of purified food constituents, and the effects of selected diets on the formation of waste products in the body. (Broughton.)

CHEM. 115 f or s. *Organic Analysis* (4)—One lecture; three laboratories. Prerequisite, Chem. 6 y and 8 y.

This course gives a connected introductory training in organic analysis, especially as applied to plant and animal substances and their manufactured products. The greater part of the course is devoted to quantitative methods for food materials and related substances. Standard works and the publications of the Association of the Official Agricultural Chemists are used freely as references. (Broughton.)

For Graduates

CHEM. 220 f or s. *Special Problems* (4 to 8)—A total of eight credit hours may be obtained in this course by continuing the course for two semesters. Laboratory, library, and conference work amounting to ten hours each week. Prerequisites, Chem. 104 f and consent of instructor.

This course consists of studies of special methods such as the separation of the fatty acids from a selected fat, the preparation of certain carbohydrates or amino acids, and the determination of the distribution of nitrogen in a protein. The students will choose, with the advice of the instructor, the particular problem to be studied. (Broughton.)

CHEM. 221 f or s. *Tissue Analysis* (3)—Three laboratories. Prerequisite, Chem. 12 f or its equivalent.

A discussion and the application of the analytical methods used in determining the inorganic and organic constituents of live tissue. (Broughton.)

CHEM. 224 f or s. *Research* (5 to 10)—Agricultural chemical problems will be assigned to graduate students who wish to gain an advanced degree. (Broughton.)

F. Industrial Chemistry

For Advanced Undergraduates and Graduates

CHEM. 110 y. *Industrial Chemistry* (6)—Three lectures. Prerequisites, Chem. 6 y and 8 y.

A study of the principal chemical industries; factory inspection, trips and reports; the preparation of a thesis on some subject of importance in the chemical industries.

CHEM. 111 y. *Engineering Chemistry* (2)—One lecture. A course for engineering students.

A study of water, fuels and combustion, the chemistry of engineering materials, etc. Problems typical of engineering work.

CHEM. 112 f. *Gas Analysis* (4)—One lecture; three laboratories. Prerequisite, Chem. 6 y.

An experimental study of the methods of determining quantitatively the common gases. Flue gas analysis and its significance.

For Graduates

CHEM. 222. *Unit Processes of Chemical Engineering* (3)—Three lectures. Prerequisite, consent of instructor.

A theoretical discussion of evaporation, distillation, filtration, etc. Problems.

CHEM. 223 y. *Research in Industrial Chemistry*. The investigation of special problems and the preparation of a thesis toward an advanced degree.

G. Chemical Seminar

CHEM. 226 y (2)—Required of all graduate students in chemistry. The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject. (The Chemistry Staff.)

DAIRY HUSBANDRY

PROFESSOR MEADE; ASSISTANT PROFESSORS INGHAM, MUNKWITZ.

D. H. 1 s. *Farm Dairying* (3)—Two lectures; one laboratory.

Types and breeds of dairy cattle, the production and handling of milk on the farm, use of the Babcock test starters, cottage cheese, and farm butter-making.

D. H. 2 f. *Dairy Production* (3)—Two lectures; one laboratory.

Breeds of dairy cattle, their characteristics and adaptability. Methods of herd management, feeding and breeding operations, dairy herd improvement, and other factors concerned in the efficient and economical production of milk. Advanced registry requirements and dairy cattle judging.

D. H. 3 s. *Advanced Dairy Cattle Judging* (1)—One laboratory.

Comparative judging of dairy cattle. Trips to various leading dairy farms will be made. Such dairy cattle judging teams as may be chosen to represent the University will be selected from among those taking this course.

D. H. 4 y. *Dairy Manufacturing* (3)—One lecture; two laboratories.

Manufacture of butter, cheese, and ice-cream, and the preparation of culture buttermilk. Study of cream separation, pasteurization, and processing of milk and cream. Refrigeration. The second semester work will be devoted largely to the study of ice-cream, and must be preceded by the work of the first semester.

D. H. 5 f. *Market Milk* (4)—Three lectures; one laboratory. (Not offered in 1929-1930.)

The course is so planned as to cover the commercial and economic phases of market milk, relating more particularly to cost of production and distribution, processing, milk plant construction and operation, sanitation, and merchandizing. Dairy farms and commercial dairy plants will be visited and their plans of construction, arrangement of equipment, and method of operation carefully studied.

D. H. 6 s. *Marketing and Grading of Dairy Products* (2)—One lecture; one laboratory.

Dairy marketing from the standpoint of producer, dealer, and consumer; market grades and the judging of dairy products.

D. H. 7 s. *Dairy Plant Technique* (2)—One lecture; one laboratory. Prerequisites, D. H. 2; Bact. 103; Chem. 121.

This course is designed to give students practice in the application of dairy technology. Commercial dairy laboratory tests will be made and their economic value as they relate to the dairy industry studied.

D. H. 8 y. *Research and Thesis* (4-6)—This work to be done by assignment and under supervision. Opportunity will be given to study and summarize the data on some special problem or to carry on original investigations in problems in Dairy Husbandry. The results of such study or problems must be presented in the form of a thesis, a copy of which shall be filed in the department library.

D. H. 9 s. *Dairy Accountancy* (2)—One lecture; one laboratory. Installation and operation of accounting systems in dairies and ice-cream plants. Inventories, income and expenditure, and labor distribution; their calculation and utilization in determining the cost of the finished product.

For Advanced Undergraduates and Graduates

D. H. 101 s. *Advanced Breed Study* (2)—One lecture; one laboratory. Breed Association rules and regulations, important families and individuals, pedigree studies. Work largely by assignment. (Ingham.)

D. H. 102 s. *Advanced Dairy Manufacturing* (3)—Hours to be arranged as to lecture and laboratory. Prerequisite, D. H. 4. (Not offered in 1929-1930.)

Plant and laboratory management, storage problems. Study of costs of production, accounting systems, purchase of equipment and supplies, market conditions, relation of the manufacturer to the shipper and dealer.

In this course the student will be required to act as helper and foreman, and will be given an opportunity to participate in the general management of the dairy plant. Visits will be made to nearby dairies and ice-cream establishments. (Munkwitz.)

D. H. 103 y. *Seminar* (2)—Students are required to prepare papers based upon current scientific publications relating to dairying or upon their research work for presentation before and discussion by the class. (Staff.)

For Graduates

D. H. 201 y. *Research*. Credit to be determined by the amount and quality of work done. Students will be required to pursue, with the approval of the head of the department, an original investigation in some phase of dairy husbandry, carry the same to completion, and report the results in the form of a thesis. (Staff.)

ECONOMICS AND SOCIOLOGY

ASSOCIATE PROFESSOR CADISCH; ASSISTANT PROFESSOR DODDER;
MR. DANIELS, MR. BELLMAN, MR. CARPENTER.

A. Economics

Soc. Sci. 1 y. *Elementary Social Sciences* (6)—Three lectures. Credit not given unless the full-year course is completed. An orientation course in the Social Sciences. Open to Freshmen and Sophomores. If taken by Juniors or Seniors only two credits per semester will be granted.

This course deals with the basis and nature of society; the process of social evolution; the economic organization of society; the rise of government and law as institutions; and the nature and extent of social control of man's activities; problems of citizenship. It forms the foundation upon which the principles of economics and sociology, and the science of government are based.

ECON. 1 f. *Economic Geography and Industry* (3)—Three lectures.

An examination of the principal geographical phenomena which form the basis of the economic life of man. The principal natural resources utilized in modern civilization; their distribution upon the surface of the earth in characteristic regions, the industrial development of those regions; routes of trade between the major producing regions.

ECON. 2 s. *History of World Commerce* (3)—Three lectures.

The development of commerce from the early ages until the present time. The rise and fall of commercial institutions and their economic reactions upon the social structure throughout history. Discoveries and inventions leading to the industrial revolution and the rise of the modern factory system. Post-war changes in the modern economic organization.

ECON. 3 f or s. *Principles of Economics* (3)—Three lectures.

A study of the general principles of economics; production, exchange, distribution, and consumption of wealth. Separate sections are organized for engineering and agriculture students.

ECON. 4 s. *Economic Problems* (3)—Three lectures.

A continuation of Economics 3 f, with emphasis on the study of modern economic problems. Among those discussed are the following: the business cycle, trusts, labor problems, railroads, banking reform, taxation, public ownership, socialism, social reform, and foreign commerce.

For Advanced Undergraduates and Graduates

ECON. 101 f. *Money and Credit* (2)—Two lectures. Prerequisite, Econ. 3 f or s.

A study of the origin, nature, and functions of money, monetary systems, credit and credit instruments, prices, interest rates, and exchanges. (Cadisch.)

ECON. 102 s. *Banking* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Should be preceded by Econ. 101 f.)

Principles and practice of banking in relation to business, commercial banking, trust companies, savings banks, agricultural financial organizations, Federal Reserve system. (Cadisch.)

ECON. 103 f. *Investments* (3)—Three lectures. Prerequisite, Econ. 3 f or s.

Classes of securities, stocks and bonds, railroad, public utility, real estate securities, government, state, and municipal bonds, stock and bond houses, taxation of investments. (Cadisch.)

ECON. 104 f. *Public Finance* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Alternate years. Not offered in 1929-1930.)

The nature of public expenditures, sources of revenue, the principles of taxation, an examination of types of taxes to determine their effects upon the individual and the community. Federal taxation in the United States, public credit, national debt, and budget of the United States. (Daniels.)

ECON. 105 f. *Business Organization and Operation* (2)—Two lectures. Prerequisite, Econ. 3 f or s.

An introductory course dealing with the fundamental principles of business organization and management. The evolution of management, forms of business enterprises, administration, types of internal organization, planning, purchasing, and personnel problems. Emphasis is placed upon the application of scientific methods in the solution of business problems. (Dodder.)

ECON. 106 s. *Corporation Finance* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Should be preceded by Econ. 105 f.)

Principles of financing, the corporate form and its status before the law, owned and borrowed capital, basis of capitalization, sources of capital funds, sinking funds, distribution of surplus, corporation failures, reorganizations, receiverships, and holding companies. (Dodder.)

ECON. 107 f. *Business Law* (3)—Three lectures. The aim of this course is to train students for practical business affairs, giving the legal information necessary to an understanding of the rights and liabilities involved in business transactions. Some phases of the work are requisites and forms of contracts and remedies for their breach; negotiable instruments, agency, partnership, corporations, real and personal property, sales, mortgages, and insurance. (Carpenter.)

ECON. 108 s. *Business Law* (3)—Three lectures (continuation of Econ. 107 f.). Prerequisite, Econ. 107 f. (Carpenter.)

ECON. 109 y. *General Accountancy* (6)—Two lectures; one laboratory.

This course has three aims; namely, to give the prospective business man an idea of accounting as a means of control, to give him a working knowledge of accounting fundamentals, and to serve as a basic course for advanced and special accounting. Theory of debits and credits, ledger, special journals, trial balance, work sheets, statements, control accounts, adjustment and closing entries. Change of partnership form to corporation. Voucher systems, statements, and special accounts peculiar to corporation accounting. (Dodder.)

ECON. 110 y. *Advanced Accountancy* (6)—Three lectures. Prerequisite, Econ. 109 y.

Theory of asset and liability accounts. Agency and branch accounting, consignments, venture accounts, and working paper operation. Correction of statements, special phases of corporation accounts, such as capital stock, stock subscriptions, unearned income, surplus, good-will, fixed assets, depreciation, contingent liabilities, and mergers. Introduction of accounting systems for manufacturing, mercantile and other institutions. (Dodder.)

ECON. 111 s. *Railway Transportation* (3)—Three lectures. Prerequisite, Econ. 3 f or s.

Development of the railway net of the United States; railroad finance and organization; problems of railway maintenance and method of conducting transportation; theory of railway rates; personal and local discrimination; geographical location and market competition; railway agreements; regulation by State and Federal governments; recent legislation. (Daniels.)

ECON. 112 f. *Public Utilities* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Alternate years, offered in 1929-1930.)

An examination of the fundamental basis for the concept of certain forms of business as peculiarly essential to the public welfare. Problems of rates, management, and finance of corporations engaged in supplying electricity, gas, street railway, telegraph and telephone service to the public. Government regulation and supervision of rates and finance. (Daniels.)

ECON. 113 s. *Life Insurance* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Alternate years. Not offered in 1929-1930.)

Nature and use of life insurance, classification of policies, mortality tables, calculation of premiums, reserves, and dividends, loading, fraternal, assessment, industrial, disability and group insurance. (Cadisch.)

ECON. 114 s. *Property Insurance* (2)—Two lectures. Prerequisite, Econ. 3 f or s. (Alternate years, offered in 1929-1930.)

Fire, marine, automobile, and miscellaneous forms of property insurance. Rates, reserves, underwriters, agencies and brokers, reinsurance. (Cadisch.)

ECON. 115 y. *History of Economic Theory* (4)—Two lectures. Prerequisite, Econ. 3 f or s. Senior standing.

History of economic doctrines and theories from the eighteenth century to the modern period, with special reference to the theories of value and distribution. (Cadisch.)

ECON. 116 s. *Foreign Trade* (2)—Two lectures. Prerequisites, Econ. 1 f and Econ. 3 f or s. (Alternate years, offered in 1929-1930.)

A study of various business methods in foreign countries. Major differences between the conduct of domestic and foreign commerce. Survey of practices generally adopted in international shipping, banking, and trading. (Daniels.)

ECON. 117 f. *Marketing Organization and Administration* (3)—Three lectures. Prerequisite, Econ. 3 f or s. (Alternate years. Not offered in 1929-1930.)

Marketing structure and functions from an administrative point of view. Marketing problems and methods of the manufacturer, jobber, selling agent, retailer, chain store, and mail order executive. Merchandizing, stock control, salesmanship, advertising and sales management, wholesale and retail credits and collections, market analysis, and marketing policies. (Dodder.)

ECON. 118 s. *Marketing Organization and Administration* (3)—Three lectures. Prerequisite, Econ. 117 f. Continuation of Econ. 117 f. (Dodder.) (Alternate years. Not offered in 1929-1930.)

For Graduates

ECON. 201 y. *Thesis* (4-6)—Graduate Standing. (Members of the Staff.)

Sociology

Soc. 2 f. *Principles of Sociology* (3)—Three lectures.

The development of human nature; personality as a social product; primary groups; isolation; forms of social interaction; social forces and processes; the structure, organization, and activities of society; social control and social change.

Soc. 3 s. *Cultural Anthropology* (2)—Two lectures.

Nature and diffusion of early cultures; sentiments, moral attitudes, and mental traits of primitive man; primitive social organizations and activities; contemporary primitive cultures. Museum exhibits will be correlated with class room work.

Soc. 4 f. *Rural Sociology* (2)—Two lectures.

Historical and psychological backgrounds of rural life; the significance of isolation; factors tending to diminish isolation; structure and function of rural communities; social factors influencing the development of rural communities and institutions; co-operation and the expansion of rural life.

Soc. 5 s. *Urban Sociology* (2)—Two lectures.

The process of urbanization; its social significance; its tendency to modify human relationships and social institutions. Special problems which arise with the growth of cities.

For Advanced Undergraduates and Graduates

Soc. 101 y. *Social Problems and Institutions* (4)—Two lectures. Prerequisite, Soc. 2 f.

Individual and group mal-adjustment, causative factors, social complications; techniques in social restoration; public and private organizations administering social treatment; the development of social work. Visits to some of the major social agencies are correlated with the classroom work. (Bellman.)

Soc. 102 f. *Labor Problems* (2)—Two lectures.

The social function of industry; existing relations between employer, employee, and consumer; labor problems as types of social mal-adjustment; factors in causation; present and proposed approaches to industrial equilibrium. (Bellman.)

Soc. 103 s. *History of Social Theory* (3)—Three lectures. Prerequisite, Soc. 2 f.

A survey of man's attempt to understand, explain, and control social organization. The origin of Sociology and its present progress toward becoming the science of human relationships. (Bellman.)

(See Education, Agricultural Education and Rural Life.)

EDUCATION

PROFESSORS SMALL, COTTERMAN; ASSOCIATE PROFESSOR SPROWLS;
ASSISTANT PROFESSOR LONG; MISS SMITH, MISS
ROSASCO, MR. BRECHBILL.

A. History and Principles

Ed. 1 y. *Educational Guidance* (2)—One lecture. Required of students registered in the College of Education; elective for others.

This course is designed to assist students in adjusting themselves to the demands and problems of college and professional life and to guide them in the selection of college work during subsequent years. Among the topics discussed are the following: student finances; student welfare; intellectual ideals; recreation and athletics; study problems; general reading; student organization; student government; the curriculum; election of courses; the selection of extra-curricular activities.

Ed. 2 f. *Public Education in the United States* (2)—Required of all sophomores in Education.

A study of the theory and practice of public education in the United States as it has been developed and is now organized. The emphasis will be on elementary education and secondary education, with proportionate treatment of vocational education and relations of elementary and secondary education to higher education.

Ed. 3 s. *Educational Hygiene* (2)—Open to Sophomores and Juniors. Required of Sophomores in Education. Seniors not admitted.

Elements of general, individual, and group hygiene; causes of health and disease; habits; knowledge and ideals of health; health as an objective of education.

For Advanced Undergraduates and Graduates

Ed. 101 f. *Educational Psychology* (3)—Open to Juniors and Seniors. Required of all Juniors in Education.

General characteristics and use of original tendencies; principles of mental development; the laws and methods of learning; experiments in rate of improvement; permanence and efficiency; causes and nature of individual differences; principles underlying mental tests; principles which should govern school practices. (Sprowls.)

Ed. 102 s. *Technic of Teaching* (3)—Three lectures; one laboratory. Required of Juniors in Education. Prerequisite, Ed. 101 f.

The nature of educational objectives; steps of the lesson plan; observation and critiques; survey of teaching methods; type lessons; lesson planning; class management. (Long.)

Ed. 103 s. *Principles of Secondary Education* (3)—Required of all Seniors in Education. Prerequisites, Ed. 101 f, Ed. 102 s, and full Senior standing.

Evolution of secondary education; articulation of the secondary school with the elementary school, college, and technical school, and with the community and the home; the junior high school; programs of study and the reconstruction of curricula; teaching staff; student activities. (Small.)

Ed. 104 f. *History of Education* (3)—Senior Elective.

History of the evolution of educational theory, institutions, and practices. Emphasis is upon the modern period. (Small.)

Ed. 105 f. *Educational Sociology* (3)—Three lectures.

The sociological foundations of education; the major educational objectives; the function of educational institutions; the program of studies; objectives of the school subjects; group needs and demands; methods of determining educational objectives. (Cotterman.) Not given in 1929-1930.

Ed. 106 s. *Advanced Educational Psychology* (3)—Prerequisites, Ed. 101 f and Ed. 102 s. The latter may be taken concurrently with Ed. 106 s.

Principles of genetic psychology; nature and development of the human organism; development and control of instincts. Methods of testing intelligence; group and individual differences and their relations to educational practice. Methods of measuring rate of learning; study of typical learning experiments. (Sprowls.)

Ed. 107 f. *Educational Measurements* (3)—Prerequisites, Ed. 101 f and Ed. 102 s.

A study of typical educational problems involving educational scales and standard tests. Nature of tests, methods of use, analysis of results and practical applications in educational procedure. Emphasis will be upon tests for high school subjects. (Sprowls.)

Ed. 108 s. *Mental Hygiene* (3)—Prerequisite, Ed. 101 f or Psychol. 1 f or s or equivalent.

Normal tendencies in the development of character and personality. Overcoming problems of adjustment to school and society; obsessions, fears,

compulsions, conflicts, inhibitions, and compensations. Methods of personality analysis. (Sprowls.)

Ed. 109 y. *Child Development* (4)—Seniors and graduate students. Prerequisite, H. E. Ed., 102 f or equivalent.

A survey of existent knowledge of the physiological, psychological, and psychiatric development of children. This course is given at the Washington Child Research Center, Tuesday and Thursday at 4 P. M. (Sherman.)

AG. ED. 102 s. *Rural Life and Education*.

AG. ED. 105 f. *School and Rural Community Surveys*.

(See Agricultural Education.)

For Graduates

Ed. 201 y. *Seminar in Education* (6)—(The course is organized in semester units.)

Problems in educational organization and administration. Study of current literature; individual problems. (Small.)

Ed. 202 f. *College Teaching* (3)—One seminar period.

Analysis of the work of the college teacher; objectives; nature of subject matter; nature of learning; characteristics of college students; methods of college teachers; measuring results; extra-course duties; problems; investigations; reports. (Cotterman.)

Ed. 203 s. *Problems in Higher Education* (3)—One double period a week. Lectures, surveys, and individual reports. Prerequisite, Ed. 202 f.

American collegiate education; status of the college teacher; collegiate education in foreign countries; demands upon institutions of higher learning; tendencies in the reorganization of collegiate education; curriculum problems; equipment for teaching. (Cotterman.)

Ed. 204 s. *Chemical Education* (2)—Two lectures. Open to graduate students whose major is chemistry. Prerequisites, Ed. 101 f and Ed. 202 f.

Recent developments in the field of chemical education methods, laboratory design, equipment, etc. Required of all students qualifying for college chemistry teaching. Not given in 1929-1930.

Ed. 205 f-s. *Psychiatric Problems in Education* (3-3).

This course is open to graduate students who have sufficient background in psychology and education and have demonstrated ability to undertake a minor research. Conducted at the Washington Child Research Center. Hours to be arranged. (Sherman.)

B. Methods in Arts and Science Subjects (High School)

Ed. 110 y. *English in Secondary Schools* (6)—Special methods and supervised teaching. Required of seniors preparing to teach English. Prerequisites, Ed. 101 f and 102 s.

Objectives in English in the different types of secondary schools; selection of subject matter; State requirements; interpretation of the State Course of Study in terms of modern practice and group needs; organization of materials; lesson plans; measuring results; observations; class teaching; critiques. (Smith.)

Ed. 111 y. *History and Civics in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach history. Prerequisites, Ed. 101 f and 102 s; H. 1 y and H. 2 y.

Objectives of history and civics in secondary schools; selection of subject matter; parallel reading; State requirements and State courses of study; the development of civics from the community point of view; reference books, maps, charts, and other auxiliary materials; the organization of materials; lesson plans; measuring results; observations; class teaching; critiques. (Long.)

Ed. 112 y. *Foreign Language in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach foreign language. Prerequisites, Ed. 101 f and 102 s.

Objectives of foreign language in secondary schools; selection of subject matter; State requirements and State courses of study; the organization of material for teaching; lesson plans; special devices and auxiliary materials; observation; class teaching; critiques. (Rosasco.)

Ed. 113 y. *Mathematics in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach mathematics. Prerequisites, Ed. 101 f and 102 s.

Objectives of mathematics in secondary schools; historic retrospect; selection of subject matter; State requirements and State courses of study; proposed reorganizations; lesson plans; textbooks and supplementary materials; measuring results; standard tests; observations; class teaching; critiques. (Brechtbill.)

Ed. 114 y. *Science in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach science. Prerequisites, Ed. 101 f and 102 s.

Objectives of science in secondary schools; historic retrospect; selection of subject matter; State requirements and State courses of study; textbooks, reference works, and other sources of materials; the organization of materials for instruction; methods of the class period; lesson plans; organization of laboratory instruction; notebooks; measuring results; standard tests; observation; class teaching; critiques. (Brechtbill.)

ENGINEERING

PROFESSORS JOHNSON, GWINNER, CREESE, STEINBERG, NESBIT; ASSISTANT
PROFESSORS HODGINS, HOSHALL, SKELTON; MR. RESSER, MR. PYLE,
MR. HENNICK.

Civil Engineering

C. E. 101 f. *Elements of Railroads* (3)—Two lectures; one laboratory. Prerequisite, Surv. 2 s. Required of Juniors in Civil Engineering.

The theory and practice of railroad surveys, alignment and earthwork. Preliminary steps toward complete plans for a short railroad. (Skelton.)

C. E. 102 s. *Elements of Design of Structures* (5)—Four lectures; one laboratory. Prerequisite, Mech. 2 y. Required of Juniors in Civil Engineering.

The theory and elementary design of structures of masonry and of steel. Analysis of stresses in roof trusses, plate girders, bridges, trusses, retaining walls, and dams. (Steinberg and Skelton.)

C. E. 103 s. *Elements of Steel Design* (2)—One lecture; one laboratory. Required of Juniors in Mechanical Engineering.

Design of steel beams and columns. Analysis of roof trusses, plate girders, and traveling cranes. Particular application to industrial buildings. (Skelton.)

C. E. 104 y. *Buildings, Masonry and Steel* (8)—Three lectures; one laboratory. Prerequisite, C. E. 102 s. Required of Seniors in Civil Engineering.

A continuation of C. E. 102 s with particular application to the design of buildings both of masonry and of steel. (Skelton.)

C. E. 105 y. *Bridges, Masonry and Steel* (8)—Three lectures; one laboratory. Prerequisite, C. E. 102 s. Required of Seniors in Civil Engineering.

A continuation of C. E. 102 s with particular application to the design of bridges both of masonry and of steel. (Steinberg.)

C. E. 106 f. *Highways* (4)—Three lectures; one laboratory. Prerequisites, Surv. 101 f, Mech. 2 y. Required of Seniors in Civil Engineering.

Location, construction, and maintenance of roads and pavements. Highway contracts and specifications, estimates and costs, highway work, highway legislation, highway economics, and highway transportation. The course will include, in addition to lecture and classroom work, field inspection trips. (Johnson.)

C. E. 107 y. *Sanitation* (6)—Three lectures. Prerequisite, Mech. 2 y. Required of Seniors in Civil Engineering.

Methods of estimating consumption and designing water supply and sewerage systems. (Pyle.)

C. E. 108 s. *Thesis* (4)—Required of Seniors in Civil Engineering. In this course the student selects, with faculty approval, a subject in Civil Engineering design or research. He makes such field or laboratory studies as may be needed. Weekly reports of progress are required, and frequent conferences are held with the faculty members to whom the student is assigned for advice. A written report is required to complete the work. (Johnson.)

Drafting

DR. 1 y. *Engineering Drafting* (2)—One laboratory. Required of all Freshmen in Engineering.

Freehand Drawing—Lettering, exercises in sketching of technical illustrations and objects, proportion and comparative measurements.

Mechanical Drawing—Use of instruments, projections and working drawings, drawing to scale in pencil and in ink, topographic drawing, tracing and blue printing.

DR. 2 y. *Descriptive Geometry* (4)—Two laboratory periods. Prerequisite, Dr. 1 y. Required of all Sophomores in Engineering.

Orthographic projection as applied to the solution of problems relating to the point, line, and plane, intersection of planes with solids, and development. Generation of surfaces; planes, tangent and normal to surfaces; intersection and development of curved surfaces. Shades and shadows, perspective, map projection.

Electrical Engineering

E. E. 101 f. *Industrial Application of Electricity* (3)—Three lectures. Prerequisites, Phys. 2 y, Math. 7 y.

The principles and practice of the application of direct and alternating current generators and motors to specific industrial processes. (Creese.)

E. E. 102 y. *Direct Currents* (10)—Three lectures; two laboratories. Prerequisites, Phys. 2 y and Math. 7 y.

Principles of design, construction, and operation of direct current generators and motors and direct current control apparatus. The construction, characteristics, and operation of primary and secondary batteries and the auxiliary control equipment. Study of elementary alternating current circuits.

Experiments on the calibration of laboratory instruments, the manipulation of precision instruments, battery characteristics, and the operation and characteristics of direct current generators and motors. (Hodgins.)

E. E. 103 y. *Electrical Machine Design* (2)—One laboratory. Prerequisites, Phys. 2 y, Math. 7 y, and to take concurrently with E. E. 102 y.

Materials of construction and design of the electric and magnetic circuits of direct current generators and motors. (Hodgins.)

E. E. 104 y. *Alternating Currents* (10)—Three lectures; two laboratories. Prerequisite, E. E. 102 y.

Analytical and graphic solution of problems on single phase and poly-phase circuits; construction, characteristics, and operation of all types of alternating current generators and motors; switchboard appliances, the use of the oscillograph; alternating current power measurements. (Creese.)

E. E. 105 y. *Electrical Machine Design* (3)—One laboratory first semester; two laboratories second semester. Prerequisites, E. E. 103 y, M. E. 101 f, and to take concurrently E. E. 104 y.

Materials of construction and design of the electric and magnetic circuits of alternating current generators, motors, and transformers. (Hodgins.)

E. E. 106 y. *Electric Railways and Power Transmission* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Traffic studies, train schedules, motor characteristics, and the development of speed-distance and power-time curves, systems of control, motors and other railway equipment, electrification system for electric railways, including generating apparatus, transmission lines, substations and distribution of electrical energy for car operation; electrification of steam roads and application of signal systems, problems in operation from the selection of proper car equipment to the substation apparatus.

Survey of the electrical equipment required in central stations and substations, transmission of electric power, practical problems illustrating the principles of installation and operation of power machinery. (Hodgins.)

E. E. 107 y. *Telephones and Telegraphs* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

History and principles of magneto telephone and variable resistance transmitter, carbon transmitter, telephone receiver, induction coils, and calling equipment. These components of the telephone then are studied as a complete unit in the local battery and common battery telephones. Magneto and common battery switchboards used in telephone exchanges, automatic telephones, and the operation of simple, duplex, and quadruplex telegraphy. Solution of analytical problems on telephone transmission.

In the laboratory the units are assembled and operated. (Hodgins.)

E. E. 108 y. *Radio Telegraphy and Telephony* (7)—Two lectures and one laboratory first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Principles of radio telegraphy and telephony, design, construction, and operation of transmitting and receiving apparatus, and special study of the use of the vacuum tube for short wave transmitting and receiving. Experiments include radio frequency measurements and the testing of various types of receiving circuits. (Creese.)

E. E. 109 y. *Illumination* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Series systems of distribution, methods of street lighting, calculation of voltage drop, regulation, weights of wire and methods of feeding parallel systems, principles and units used in illumination problems, lamps and reflectors, candle-power measurements of lamps, measurement of illumination intensities and calculations for illumination of laboratories and classrooms. (Creese.)

General Engineering Subjects

ENGR. 1 y. *Prime Movers* (4)—Two lectures. Prerequisites, Math. 7 y and Phys. 2 y. Required of all Juniors in Engineering.

Salient features of the operation of steam, gas, hydraulic and electric prime movers and pumps. Comparison of types of each, methods of assembling or setting up in place for operation. Service tests. (Nesbit.)

ENGR. 2 y. *Engineering Geology* (2)—One laboratory. Lectures and field trips. Required of all Juniors in Engineering.

Study of common rocks and minerals, geologic processes and conditions affecting problems of water supply, bridge, railroad, and highway construction, dams and reservoirs, tunnels, canals, river and harbor improvements, irrigation works, and rock excavation. (Resser.)

ENGR. 3 s. *Public Utilities* (1)—One lecture. Prerequisite, Econ. 3 f or s. Required of all Seniors in Engineering.

The development of public utilities, franchises, functions, methods of financing and control of public utilities. Service standards and their attainment in electric, gas, water, railway, and other utilities. The principles that have been adopted by the courts and public service commissions for the evaluation of public utilities for ratemaking and other purposes. (Daniels.)

ENGR. 101 f. *Engineering Jurisprudence* (1)—One lecture. Required of all Seniors in Engineering.

A study of the fundamental principles of law relating to business and to engineering; including contracts, agency, sales, negotiable instruments, corporations, and common carriers. These principles are then applied to the analysis of general and technical clauses in engineering contracts and specifications. (Steinberg.)

Mechanics

MECH. 1 y. *Engineering Mechanics* (7)—Three lectures and one laboratory first semester. Two lectures and one laboratory second semester. Prerequisites, Math. 7 y and Phys. 2 y. Required of Juniors in Electrical and Mechanical Engineering.

Applied Mechanics—The analytical study of statics dealing with the composition and resolution of forces, moments and couples, machines and the laws of friction, dynamics, work, energy, and the strength of materials.

Graphic Statics—The graphic solution of problems in mechanics, center of gravity, moments of inertia and determination of stresses in frame structures.

Elements of Hydraulics—Flow of water in pipes, through orifices and in open channels. Determination of the co-efficient of discharge, velocity, and contraction in pipes and orifices. (Steinberg, Skelton.)

MECH. 2 y. *Engineering Mechanics* (9)—Four lectures and one laboratory first semester. Three lectures and one laboratory second semester. Prerequisites, Math. 7 y and Phys. 2 y. Required of Juniors in Civil Engineering.

This course is similar in content to Mech. 1 y, but with greater emphasis placed on strength of material and hydraulics. (Steinberg, Skelton.)

MECH. 3 s. *Materials of Engineering* (2)—One lecture; one laboratory. To take concurrently with Engineering Mechanics. Required of all Juniors in Engineering.

The composition, manufacture, and properties of the principal materials used in engineering and of the conditions that influence their physical char-

acteristics. The interpretation of specifications and of standard tests. Laboratory work in the testing of steel, wrought iron, timber, brick, cement, and concrete. (Johnson, Pyle, and Hoshall.)

MECH. 101 f. *Thermodynamics* (3)—Three lectures. Prerequisites, Phys. 2 y, Engr. 1 y. Required of Seniors in Electrical Engineering. (Nesbit.)

MECH. 102 y. *Thermodynamics* (6)—Three lectures. Prerequisites, Physics, 2 y, Engr. 1 y. Required of Seniors in Mechanical Engineering.

Thermodynamics as applied to properties of gases, cycles of heat, engines using gases. Properties of vapors. Entropy. The internal combustion engine. The steam turbine. Flow of fluids, and the application of thermodynamics to compressed air and refrigerating machinery. (Nesbit.)

Mechanical Engineering

M. E. 101 f. *Elements of Machine Design* (1)—One laboratory. Prerequisites, Math. 7 y and Phys. 2 y. Required of Juniors in Electrical Engineering.

Empirical design of machine parts. (Hoshall.)

M. E. 102 y. *Kinematics and Machine Design* (8)—Four lectures and two laboratories first semester. One lecture and one laboratory second semester. Prerequisites, Math. 7 y and Phys. 2 y. Required of Juniors in Mechanical Engineering.

The application of the principles involved in determining the properties and forms of machine parts. The design of bolts, screws, shafting, and gears. The theory and practice of the kinematics of machinery, as applied to ropes, belts, chains, gears and gear teeth, wheels in trains, epicyclic trains, cams, linkwood, parallel motions. Miscellaneous mechanisms and aggregate combinations. (Hoshall.)

M. E. 103 y. *Design of Prime Movers* (6)—Two lectures; one laboratory. Prerequisites, M. E. 102 y and Engr. 1 y. Required of Seniors in Mechanical Engineering.

Analysis of the stresses in gas and steam engines. Proportioning the essential parts and estimating the cost of each. The steam boiler; its design and cost. (Nesbit.)

M. E. 104 s. *Design of Power Plants* (3)—Two lectures; one laboratory. Prerequisites, Engr. 1 y, Mech. 101 f, M. E. 102 y. Required of Seniors in Mechanical Engineering.

The design of a complete power plant, including the layout of building and installation of equipment. The selection of types and capacities of the various units required. (Nesbit.)

M. E. 105 f. *Design of Pumping Machinery* (2)—One lecture; one laboratory. Prerequisites, M. E. 102 y and Mech. 1 y and 2 y. Required of Seniors in Mechanical Engineering. (Nesbit.)

Design of double-acting steam pumps and centrifugal pumps. Vacuum, condenser, and water works pumps.

M. E. 106 s. *Engineering Finance* (2)—Two lectures. Required of Seniors in Mechanical Engineering.

Financial problems of the engineer. Cost segregation and cost analysis. Basis of price and rates. Fixed charges and operating costs. Replacement cost. Depreciation. Maintenance. Taxes and insurance. Unit cost determination. Determination of size of system for best financial efficiency. (Nesbit.)

M. E. 107 y. *Mechanical Laboratory* (2)—One laboratory. Prerequisites, Engr. 1 y; Mech. 1 y, 3 s. Required of Seniors in Mechanical Engineering.

Calibration of instruments, gauges, indicator springs, planimeters, steam, gas, and water meters.

Indicated and brake horsepower of steam and internal combustion engines, setting of plain valves, Corliss valves. Tests for economy and capacity of boilers, engines, turbines. Pumps and other prime movers. Feed water heaters, condensers; B. T. U. analysis of solid, gaseous, and liquid fuels and other complete power plant tests.

M. E. 108 s. *Heating and Ventilation* (2)—Two lectures. Prerequisites, Engr. 1 y and Mech. 1 y, 3 s. Required of Juniors in Mechanical Engineering. (Nesbit.)

The principles and methods of construction in use in various systems of heating and ventilating; the design, erection, and operation of heating plants.

Shop

SHOP 1 y. *Shop and Forge Practice* (2)—One laboratory. Required of all Freshmen in Engineering.

The use and care of wood-working tools, exercises in sawing, planing, turning, and laying out work from blueprints. Patternmaking with moulding and casting demonstrations to give understanding of general principles. Forging of iron and steel, welding and making of carbon steel tools. Demonstrations in oxy-acetylene welding of steel, cast iron, brass, and aluminum, also brazing of malleable iron and steel.

SHOP 2 f. *Machine Shop Practice* (1)—One laboratory period. Prerequisite, Shop 1 y. Required of all Sophomores in Engineering.

Exercises in bench work, turning, planing, drilling, and pipe threading.

SHOP 3 s. *Machine Shop Practice* (2)—One lecture; one laboratory. Prerequisite, Shop 2 f. Required of all Sophomores in Mechanical and Electrical Engineering.

Advanced practice with standard machine shop machines. Exercises in thread cutting, surface grinding, fluting, and cutting of spur and twisted gears.

Calculations of machine shop problems involving lathe and milling machines. Problems relating to methods of manufacture of machine parts by use of jigs and time-saving fixtures.

SHOP 4 f. *Foundry Practice* (1)—One laboratory. Prerequisite, Shop 1 y. Required of Juniors in Mechanical Engineering.

Casting in brass, aluminum, and cast iron. Core making. The operation of furnace and cupola. Lectures on metals, fuels, and a foundry equipment.

Surveying

SURV. 1 f. *Surveying* (1)—Lecture and laboratory work. Prerequisite, Math. 7 y. Required of all Sophomores in Engineering.

Theory of and practice in the use of the Tape, Compass, Transit, and Level. General surveying methods, map reading, traversing, theory of stadia.

SURV. 2 s. *Plane Surveying* (2)—Lecture and Laboratory work. Prerequisite, Surv. 1 f. Required of Sophomores in Civil Engineering.

Land surveying and map making for topography and planning. Practice in stadia. Computations of coordinates. Plotting of control and detail. Establishing of line and grade for construction purposes. Laying out simple curves. Estimation of earthwork.

SURV. 101 f. *Advanced Surveying* (3)—One lecture; two laboratories. Prerequisite, Surv. 1 f and 2 s. Required of Juniors in Civil Engineering.

Adjustment of Instruments. Determination of Azimuth by Stellar and Solar observations. Triangulation, Precise leveling, Trigonometric Leveling and Geodetic Surveying, together with the computations and adjustments necessary. (Pyle.)

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR HOUSE; ASSOCIATE PROFESSORS HARMAN, HALE;
ASSISTANT PROFESSOR LEMON; MR. PYLES, MISS KUHNLE.

ENG. 1 y. *Composition and Rhetoric* (6)—Freshman year. Prerequisite, three units of high school English. Required of all four-year students.

Parts, principles, and conventions of effective thought communication. Reading, study, and analysis of standard contemporary prose specimens. Original exercises and themes.

ENG. 2 y. *Elements of Literature* (6)—Three lectures. Prerequisite, three units of high school English.

Examination of the principles of literary form. Study and interpretation of selected classics.

ENG. 3 f. *Advanced Composition and Rhetoric* (2)—Prerequisite, Eng. 1 y. Eng. 3 f and 4 s optional with Eng. 5 f and 6 s as a requirement for all students whose major is English.

Study and analysis of the best modern essays as a basis of class papers. Also original themes on assigned topics.

ENG. 4 s. *Advanced Composition and Rhetoric* (2)—Continuation of Eng. 3 f. Prerequisite, Eng. 3 f.

ENG. 5 f. *Expository Writing* (2)—Prerequisite, Eng. 1 y. Eng. 5 f and 6 s optional with Eng. 3 f and 4 s as a requirement for all students whose major is English.

Study of the principles of exposition. Analysis and interpretation of material bearing upon scientific matter. Themes, papers, and reports.

ENG. 6 s. *Expository Writing* (2).

Continuation of Eng. 5 f. Prerequisite, Eng. 5 f.

ENG. 7 f. *History of English Literature* (3)—Three lectures. Prerequisite, Eng. 1 y. Required of all students whose major is English.

A general survey, with extensive reading and class papers.

ENG. 8 s. *History of English Literature* (3).

Continuation of Eng. 7 f. Prerequisite, Eng. 7 f.

ENG. 9 f. *American Literature* (3)—Three lectures. Prerequisite, Eng. 1 y.

Lectures on the development of American literary types. Class papers.

ENG. 10 s. *American Literature* (3).

Continuation of Eng. 9 f. Prerequisite, Eng. 9 f.

ENG. 11 f. *Modern Poets* (3)—Three lectures. Prerequisite, Eng. 1 y.

English and American poets of the latter part of the Nineteenth and of the Twentieth Century.

ENG. 12 s. *Modern Poets* (3).

Continuation of Eng. 11 f. Prerequisite, Eng. 1 y.

ENG. 13 f. *The Drama* (3)—Prerequisite, Eng. 1 y.

A study of representative plays in the development of European and American drama. Reports and term themes.

ENG. 14 s. *The Drama* (3)—Continuation of Eng. 13 f. Prerequisite, Eng. 13 f.

ENG. 15 f. *Shakespeare* (3)—Three lectures. Prerequisite, Eng. 1 y. An intensive study of selected plays.

ENG. 16 s. *Shakespeare* (3).

Continuation of Eng. 15 f. Prerequisite, Eng. 1 y.

ENG. 17 f. *Business English* (2)—Two lectures. Prerequisite, Eng. 1 y.

This course develops the best methods of effective expression, both oral and written, used in business relations.

ENG. 18 s. *Business English* (2).

Continuation of Eng. 17 f. Prerequisite, Eng. 17 f.

For Advanced Undergraduates and Graduates

ENG. 105 s. *Poetry of the Romantic Age* (3)—Three lectures. Prerequisite, Eng. 7 f and 8 s or Comp. Lit. 105, first semester. A study of the Romantic movement in England as illustrated in the works of Shelley, Keats, Byron, Wordsworth, Coleridge. (Hale.)

(This course is identical with the second semester of Comp. Lit. 105 y.)

ENG. 118 y. *Literature of the Fourteenth Century* (4)—Prerequisite, Eng. 7 f.

Lectures and assigned readings in English literature at the close of the Middle Ages and the beginning of the Renaissance in England, including the metrical romances, ballads, and selections from Langland, Gower, and Chaucer. (Hale.)

ENG. 119 y. *Anglo-Saxon* (6)—Required of all students whose major is English.

A study of Anglo-Saxon (Old English) grammar and literature. Lectures on the principles of comparative philology and phonetics. (House.)

ENG. 122 f. *The Novel* (2)—Two lectures.

Lectures on the principles of narrative structure and style. Class reviews of selected novels, chiefly from English and American sources. (House.)

ENG. 123 s. *The Novel* (2).

Continuation of Eng. 122 f. (House.)

ENG. 124 f. *English and American Essays* (2)—Two lectures.

A study of the philosophical, critical, and familiar essays of England and America: Bacon, Lamb, Macaulay, Carlyle, Ruskin, Emerson, Chesterton. (House.)

ENG. 125 s. *Authorship* (2)—Two lectures. Admission to class on recommendation of instructor.

Practice in the making of literature of various types: verse, essay, fiction, drama. (House.)

ENG. 126 f. *Victorian Poets* (2)—Two lectures.

Studies in the poetry of Tennyson, Browning, Arnold, Swinburn, and others.

ENG. 127 s. *Victorian Poets* (2).

Continuation of Eng. 126 f. (House.)

ENG. 129 f or s. *College Grammar* (3)—Three lectures. Required of all students whose major is English. The course is completed each semester.

Studies in the descriptive grammar of modern English, with some account of the history of forms. (Harman.)

ENG. 130 f. *The Old Testament as Literature*—Two lectures.

A study of the sources, development, and literary types. (Hale.)

For Graduates

ENG. 201. *Seminar*—Credit proportioned to the amount of work and ends accomplished. (Staff.)

Original research and the preparation of dissertations looking toward advanced degrees.

ENG. 202 y. *Beowulf* (4)—Prerequisite, Eng. 119 y.

Critical study of grammar and versification, with some account of the legendary lore. (Harman.) Alternate with Eng. 203 f and 204 s.

ENG. 203 f. *Middle English* (2)—Prerequisite, Eng. 119 y.

A study of excerpts of the Middle English period, with reference to etymology and syntax. (Harman.)

ENG. 204 s. *Gothic* (2)—Prerequisite, Eng. 119 y.

A study of the forms and syntax, with readings from the Ulphilas Bible. Correlation of Gothic speech sounds with those of Old English. (House.) Eng. 203 f and 204 s alternate with Eng. 202 y.

ENTOMOLOGY

PROFESSOR CORY; ASSISTANT PROFESSOR KNIGHT.

ENT. 1 f or s. *Introductory Entomology* (3)—Two lectures; one laboratory. Prerequisite, Zool. 1 f or s.

The relations of insects to the daily life and activities of the student. General principles of structural and systematic entomology. Field work and the preparation of a collection of insects.

ENT. 2 y. *Intermediate Entomology* (6)—A two-semester course. Two laboratories. Credit not given for second semester alone.

Studies of the anatomy, physiology, and taxonomy of insects. A fundamental course given in preparation for most of the advanced courses. Pictures given at opportune times during laboratory periods. Prerequisite, Ent. 1 f or s.

ENT. 4 y. *Special Problems*—Prerequisite—consult department.

The intensive investigation of some entomological subject. A report of the results is submitted as part of the requirement for graduation.

ENT. 5 s. *Insecticides and Their Application* (2)—One lecture; one laboratory. Prerequisite, Ent. 1 f or s.

The principles of insecticides, their chemistry, preparation, and application; construction, care, and use of spray and dusting machinery; fumigation; methods and apparatus in mechanical control.

ENT. 6 f. *Medical Entomology* (3)—Three lectures. Prerequisite—Consult instructor.

The relation of insects to diseases of man, directly and as carriers of pathogenic organisms. Control of pests of man. The fundamentals of parasitology.

ENT. 7 y. *Entomological Technique and Scientific Delineation* (4). Prerequisite, Ent. 1 f or s.

Collecting, rearing, preserving, and mounting of insects. The preparation of exhibits, materials for instruction, entomological records. Methods of illustrating, including drawing, photography, lantern slide making, and projection. Useful for prospective teachers of biology as well as for the entomological student.

Courses for Advanced Undergraduates and Graduates

ENT. 101 y. *Economic Entomology* (6)—Three lectures.

An intensive study of the problems of applied entomology, including life history, ecology, behavior, distribution, parasitism, and control. (Cory.)

ENT. 102 y. *Economic Entomology* (4)—Two laboratories.

Expansion of Ent. 101 y to include laboratory and field work in economic entomology. (Cory.) Not offered in 1929-1930.

ENT. 103 y. *Seminar* (1)—Time to be arranged.

Presentation of original work, book reviews, and abstracts of the more important literature. (Cory, Knight.)

ENT. 104 y. *Insect Pests of Special Groups* (8). Prerequisite, Ent. 1 f or s.

A study of the principal insects of one or more of the following groups, founded upon food preferences and habitat. The course is intended to give the general student a comprehensive view of the insects that are of importance in his major field of interest and detailed information to the student specializing in entomology.

Insect Pests of 1. Fruit. 2. Vegetables. 3. Flowers, both in the open and under glass. 4. Ornamentals and Shade Trees. 5. Forests. 6. Field Crops. 7. Stored Products. 8. Live Stock. 9. The Household. Nos. 1 and 2 offered in 1929-1930 and such others as requests may indicate to be in demand. (Cory-Knight.)

Graduate Students

ENT. 201. *Advanced Entomology* (2).

Studies of minor problems in morphology, taxonomy, and applied entomology, with particular reference to preparation for individual research. (Cory.)

ENT. 202 y. *Research in Entomology* (6-10).

Advanced students having sufficient preparation, with the approval of the head of the department, may undertake supervised research in morphology, taxonomy, or biology and control of insects. Frequently the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A dissertation, suitable for publication, must be submitted at the close of the studies as a part of the requirements for an advanced degree. (Cory.)

FARM FORESTRY

PROFESSOR BESLEY.

FOR. 1 s. *Farm Forestry* (3)—Two lectures; one laboratory. Alternate year course. Not offered in 1929-1930. Junior and senior years. Prerequisite, Bot. 101 f.

A study of the principles and practices involved in managing woodlands on the farm. The course covers briefly the identification of trees; forest protection; management, measurement, and utilization of forest crops; nursery practice; and tree planting. The work is conducted by means of lectures and practice in the woods.

FARM MANAGEMENT

PROFESSOR W. T. L. TALIAFERRO.

F. M. 1 s. *Farm Accounting* (3)—Two lectures; one laboratory. Open to Juniors and Seniors.

A concise practical course in the keeping of farm accounts and in determining the cost of farm production.

F. M. 2 f. *Farm Management* (4)—Four lectures.

The business of farming from the standpoint of the individual farmer. This course aims to connect the principles and practice which the student has acquired in the several technical courses and to apply them to the development of a successful farm business.

See also Agricultural Economics, page 156.

FARM MECHANICS

PROFESSOR CARPENTER.

F. MECH. 101 f. *Farm Machinery* (3)—Two lectures; one laboratory.

A study of the design and adjustments of modern horse and tractor-drawn machinery. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

F. MECH. 102 s. *Gas Engines, Tractors, and Automobiles* (4)—Three lectures; one laboratory.

A study of the design and operation of the various types of internal combustion engines used in farm practice.

F. MECH. 103 f. *Advanced Gas Engines* (2)—One lecture; one laboratory. Prerequisite, F. Mech. 102 s.

An advanced study of the four-cylinder gasoline engine.

F. MECH. 104 f. *Farm Shop Work* (1)—One laboratory.

A study of practical farm shop exercises offered primarily for prospective teachers of vocational agriculture.

F. MECH. 105 f. *Farm Buildings* (2)—Two lectures.

A study of all types of farm structures; also of farm heating, lighting, water supply, and sanitation systems.

F. MECH. 107 s. *Farm Drainage* (2)—One lecture; one laboratory.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of laterals, calculation of grades, and methods of construction. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

GENETICS AND STATISTICS

PROFESSOR KEMP.

GEN. 101 f. *Genetics* (3)—Two lectures; one laboratory.

A general course designed to give an insight into the principles of genetics or of heredity, and also to prepare students for later courses in the breeding of animals or of crops.

GEN. 102 s. *Advanced Genetics* (3)—Two lectures; one laboratory. Prerequisite, Gen. 101 f. Alternate year course.

A consideration of chromosome irregularities and other mutations, interspecies crosses, genetic equilibrium, and the results of artificial attempts to modify germplasm.

GEN. 111 f. *Statistics* (2)—Two lectures.

A study of the collection, analysis, interpretation, and presentation of statistics. The course includes a study of expressions of type, variability, and correlation, together with the making of diagrams, graphs, charts, and maps.

GEN. 112 s. *Advanced Statistics* (2)—Two lectures. Prerequisite, Gen. 111 f. or its equivalent.

A study of the theory of error, measures of relationship, multiple and partial correlation, predictive formulas, curve fitting.

GEN. 201 y. *Research*—Credit according to work done.

GEOLOGY

PROFESSOR BRUCE.

GEOL. 1 f. *Geology* (3)—Two lectures; one laboratory.

A textbook, lecture, and laboratory course, dealing with the principles of geology and their application to agriculture. While this course is designed primarily for agriculture students in preparation for technical courses, it may also be taken as part of a liberal education.

GREEK

PROFESSOR SPENCE.

GREEK 1 y. *Elementary Greek* (8)—Four lectures.

Drill and practice in the fundamentals of Greek grammar and the acquisition of a vocabulary, with translation of simple prose.

GREEK 2 y. *Greek Grammar, Composition, and Translation of Selected Prose Work* (8)—Four lectures. Prerequisite, Greek 1 y or two entrance units in Greek.

HISTORY AND POLITICAL SCIENCE

PROFESSORS CROTHERS, SPENCE; ASSOCIATE PROFESSOR SCHULZ; DR. JAEGER.

A. History

H. 1 y. *Modern European History* (6)—Three lectures and assignments.

The object of the course is to acquaint students with the chief events in European History during the modern period. The lectures are so arranged as to present a comparative and contrastive view of the most important events during the period covered.

H. 2 y. *American History* (6)—Three lectures and assignments. Open to Sophomores.

An introductory course in American History from the discovery of the New World to the present time.

H. 3 y. *History of England and Greater Britain* (6)—Three lectures and assignments. Open to Freshmen.

A survey course of English History.

For Advanced Undergraduates and Graduates

H. 101 f. *American Colonial History* (3)—Three lectures and assignments. Prerequisite, H. 2 y.

A study of the political, economic, and social development of the American people from the discovery of America through the formation of the Constitution. (Crothers.)

H. 102 s. *Recent American History* (3)—Three lectures. Prerequisite, H. 2 y.

The history of national development from the close of the reconstruction period to the present time. (Crothers.)

H. 103 y. *American History 1790-1865* (4)—Two lectures. Prerequisite, H. 2 y.

The history of national development to the reconstruction period. (Crothers.)

H. 104 y. *World History Since 1914* (6)—Three lectures.

A study of the principal nations of the world since the outbreak of the World War. (Alternates with H. 105 y. (Jaeger.)

H. 105 y. *Diplomatic History of Europe in the Nineteenth and Twentieth Centuries* (6)—Three lectures.

A study of the European nations, stressing their political problems and their political activities. (Alternates with H. 104 y. Not given in 1929-1930. (Jaeger.)

H. 106 s. *History of Maryland* (2)—Two lectures.

A study of the Colony of Maryland and its development into statehood. (Spence.)

H. 107 f. *Ancient Civilization* (3)—Three lectures. Required of students taking a major or minor in Classical Languages.

Treatment of ancient times, including Geography, Mythology, and Philosophy. (Spence.)

H. 108 y. *American Diplomacy* (4)—Two lectures.

A study of American foreign policy. (Alternates with H. 109 y. Not given in 1929-1930.) (Crothers.)

H. 109 y. *History of the American Frontier* (4)—Two lectures.

The development of the West. (Alternates with H. 108 y.) (Crothers.)

B. Political Science

Soc. Sci. 1 y. *Elementary Social Sciences* (6). (For description of course, see Economics and Sociology, Page 175.)

POL. SCI. 2 f. *Government of the United States* (3)—Three lectures. Open to Sophomores.

A study of the Government of the United States. Evolution of the Federal Constitution; function of the Federal Government.

POL. SCI. 3 s. *Governments of Europe* (3)—Three lectures. Prerequisite, Pol. Sci. 2 f.

A rapid survey and comparative study of the political organization of the principal states of Europe. Classification of forms, separation of powers.

For Advanced Undergraduates and Graduates

POL. SCI. 101 f. *American Municipal Government* (2)—Two lectures. Prerequisite, Pol. Sci. 2 f.

A study of American City Government; organization and administration; city manager and commission plans; initiative, referendum, and recall.

POL. SCI. 102 y. *Constitutional Law and History of the United States* (4)—Two lectures and cases. Prerequisite, Pol. Sci. 2 f. Seniors and graduate students.

A study of the historical background of the Constitution and its interpretation. (Alternates with Pol. Sci. 103 y. May not be given 1929-1930.)

POL. SCI. 103 y. *International Law* (4)—Two lectures and cases. Prerequisite, Pol. Sci. 2 f. Seniors and graduate students.

A study of the sources, nature, and sanction of international law, peace, war, and neutrality. (Alternates with Pol. Sci. 102 y. May not be given 1929-1930.)

POL. SCI. 104 s. *Political Parties in the United States* (3)—Prerequisite, Pol. Sci. 2 f.

The development and growth of American political parties. Party organization and machinery. (Schulz.)

HOME ECONOMICS

PROFESSORS MOUNT, MCFARLAND; ASSOCIATE PROFESSOR WELSH;
ASSISTANT PROFESSOR MURPHY.

Textiles and Clothing

H. E. 11 f. *Textile Fabrics* (3)—Three recitations.

History of textile fibers; standardization and identification of textile fibers and materials. (McFarland.)

H. E. 12 f. *Clothing Construction* (3)—One recitation; two laboratories. Construction and care of clothing; clothing budget. (McFarland.)

For Advanced Undergraduates

H. E. 111 f. *Advanced Clothing* (4)—One recitation, three laboratories. Prerequisites, H. E. 11 f; H. E. 12 f.

The modeling and draping of dresses emphasizing the relationship to the individual of line, form, color, and texture. (McFarland.)

H. E. 112 s. *Special Clothing Problems* (3)—One recitation; two laboratories. Prerequisite, H. E. 111 f.

Children's clothing; evening wraps, ensembles. (McFarland.)

H. E. 113 f. *Problems and Practice in Textiles or Clothing* (5)—Prerequisite, H. E. 111 f.

Opportunity for commercial experience in shops, laboratories, etc. (McFarland.)

Foods and Nutrition

H. E. 31 y. *Elementary Foods* (6)—One recitation; two laboratories. Prerequisite, General Chemistry and Qualitative Analysis (Chem. 1 y).

Principles of cookery; composition of foods; planning and serving of meals. (Welsh.)

For Advanced Undergraduates

H. E. 131 f. *Nutrition* (3)—Three recitations. Prerequisites, H. E. 31 y and Elements of Organic Chemistry (Chem. 12 f).

Nutritive value, digestion and assimilation of foods. (Welsh.)

H. E. 132 s. *Nutrition* (3)—Two recitations; one laboratory. Prerequisite, H. E. 131 f.

Selection of food to promote health; pathological diets as treated in the home; children's diets. (Welsh.)

H. E. 133 f. *Demonstrations* (2)—Two laboratories.

Practice in demonstrations. (Welsh.)

H. E. 134 s. *Advanced Foods* (3)—One recitation; two laboratories. Prerequisite, H. E. 31 y.

Advanced cookery and catering. (Welsh.)

H. E. 135 s. *Problems and Practice in Foods* (5).

Commercial experience in foods or food research.

Art

H. E. 21 s. *Principles of Design* (3)—One recitation; two laboratories. Space division and space relation; color theory and harmony; original designs in which lines, notan, and color are used to produce fine harmony. (McFarland.)

H. E. 22 s. *Still Life* (1)—One laboratory. Prerequisite, H. E. 21 s.

Work in charcoal and color. Offered alternate years. (McFarland.)

H. E. 23 s. *Figure Sketching* (1)—One laboratory. Alternates with *Still Life* (H. E. 22 s). (McFarland.)

H. E. 24 s. *Costume Design* (3)—One recitation; two laboratories. Prerequisite, H. E. 21 s.

Appropriate dress; application of color, harmony, and proportion of parts to costumes. (McFarland.)

For Advanced Undergraduates

H. E. 121 s. *Interior Decoration* (3)—Two recitations; one laboratory. Prerequisite, H. E. 21 s.

Style of architecture; application of colors in home decorations; furnishings from a sanitary, economical, and artistic point of view. (Murphy.)

H. E. 122 s. *Applied Art* (1)—One laboratory.

Application of the principles of design and color to practical problems.

H. E. 123 f. *Advanced Costume Design* (3)—Three laboratories. Prerequisite, H. E. 24 s.

Figure sketching; sketching and modeling of costumes for various types of figures. (McFarland.)

Home and Institutional Management

H. E. 141 f. *Management of the Home* (5).

Experience in operating and managing a household composed of a faculty member and a small group of students for approximately one-third of a semester.

H. E. 142 f. *Buying for the Home* (2)—One recitation. One laboratory period.

Purchasing commodities for the home.

H. E. 143 y. *Institutional Management* (6)—Three recitations.

The organization and management of institutional dining halls, dormitories, and laundries; and of commercial cafeterias, tea-rooms, and restaurants. (Mount.)

H. E. 144 f. *Practice in Institutional Management* (5)—Prerequisite, H. E. 143 y.

Practice work in the University Dining Hall, in a tea-room, or in a cafeteria. (Mount.)

H. E. 145 s. *Advanced Institutional Management* (3)—Prerequisite, H. E. 144 f. One recitation weekly and individual conferences with the instructors.

Special problems in Institutional Management. (Mount.)

Home Economics Extension

H. E. 151 f. *Field Practice in Home Economics Extension* (5)—Given under the direction of Miss Venia Kellar, State Home Demonstration Agent.

Home Economics Seminar

H. E. 161 s. *Seminar* (3)—Three recitations.

Book reviews and abstracts from scientific papers and bulletins relating to Home Economics, together with criticisms and discussion of the work presented. (Staff.)

HOME ECONOMICS EDUCATION

PROFESSOR McNAUGHTON; MISS BUCKEY.

H. E. Ed. 100 s. *Technic of Teaching* (3)—Three lectures; one laboratory. Required of Juniors in Home Economics Education. Prerequisite, Ed. 101 f.

The nature of educational objectives; steps of the lesson plan; observations and critiques; survey of teaching methods; type lessons; lesson planning; class management. (McNaughton.)

H. E. Ed. 101 s. *Education of Women* (3).

History of the family; the effect of civilization upon the organization of the home and the status of its members; educational opportunities for women; training for citizenship, professions, and the home. (McNaughton.)

H. E. Ed. 102 f. *Child Study* (5).

Child psychology with observation and work in the Washington Child Research Center; books, games, and music for children; physical care; study of physical and mental growth. (McNaughton.)

H. E. Ed. 103 f. *Teaching Secondary Vocational Home Economics: Methods and Practice* (5)—Prerequisite, H. E. Ed. 100 s.

Objectives of vocational home economics; the Smith-Hughes law and its administration; a survey of the needs of the high school girl; adaptation of the state course of study to the needs of the community; methods of instruction; use of the home project; use of illustrative material; improvement of home economics library; study of equipment; outline units of instruction; lesson plans; observation; participation teaching, conferences, and critiques. (McNaughton and Buckey.)

HORTICULTURE

PROFESSORS AUCHTER, GEISE, THURSTON;

ASSISTANT PROFESSOR WHITEHOUSE.

A. Pomology

HORT. 1 f. *Elementary Pomology* (3)—Two lectures; one laboratory.

A general course in pomology. The proper location and site for an orchard; varieties, planting plans, inter-crops, spraying, cultural methods, fertilizing methods, thinning, picking, packing, and marketing are given consideration. These subjects are discussed for apples, peaches, pears, plums, cherries, and quinces. The principles of plant propagation as applied to pomology are also discussed.

HORT. 2 f. *Systematic Pomology* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1 f.

The history, botany, and classification of fruits and their adaptation to Maryland conditions. Exercises are given in describing and identifying the leading commercial varieties of fruits. Students are required to help set up the fruit show each year. Not offered 1929-1930. Given in alternate years.

HORT. 3 f. *Advanced Practical Pomology* (1)—Senior year. Prerequisites, Hort. 1 f and 101 f.

A trip occupying one week's time will be made through the principal fruit regions of eastern West Virginia, Maryland, and Pennsylvania. A visit to the fruit markets of several large cities will be made. The cost of this trip should not exceed thirty dollars to each student. Each student will be re-

quired to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

HORT. 4 s. *Small Fruit Culture* (2)—One lecture; one laboratory. Not offered in 1929-1930. Given in alternate years.

The care and management of small fruit plantations. Varieties and their adaptation to Maryland soils and climate, packing, marketing, and a study of the experimental plots and varieties on the Station grounds. The following fruits are discussed: the grape, strawberry, blackberry, blackcap raspberry, red raspberry, currant, gooseberry, dewberry, and loganberry.

HORT. 5 f. *Fruits and Vegetable Judging* (2)—Two laboratories. Prerequisites, Hort. 1 f and 11 s.

A course designed to train students for fruit-judging teams and practical judging. Students are required to know at least one hundred varieties of fruit, and are given practice in judging single plates, largest and best collections, boxes, barrels, and commercial exhibits of fruits and vegetables. Students are required to help set up the college horticultural show each year.

HORT. 6 f. *Advanced Fruit Judging* (1)—One laboratory. Prerequisite, Hort. 5 f.

B. Vegetable Crops

HORT. 11 s. *Principles of Vegetable Culture* (3)—Two lectures; one laboratory.

A study of fundamental principles underlying all garden practices. Each student is given a small garden to plant, cultivate, spray, fertilize, harvest, etc.

HORT. 12 f. *Truck Crop Production* (3)—Three lectures. Prerequisite, Hort. 11 s.

A study of methods used in commercial vegetable production. Each individual crop is discussed in detail. Trips are made to large commercial gardens, various markets, and other places of interest.

HORT. 13 s. *Vegetable Forcing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 11 s. Not offered in 1929-1930. Given in alternate years.

All vegetables used for forcing are considered. Laboratory work in sterilization and preparation of soils, cultivation, regulation of temperature and humidity, watering, training, pruning, pollination, harvesting, and packing.

C. Floriculture

HORT. 21 s. *General Floriculture* (2)—One lecture; one laboratory.

The management of greenhouse; the production and marketing of florists' crops; retail methods; plants for house and garden. Not offered in 1929-1930. Given in alternate years.

HORT. 22 y. *Greenhouse Management* (6)—Two lectures; one laboratory.

A consideration of the methods employed in the management of greenhouses, including the operations of potting, watering, ventilating, fumi-

gation, and methods of propagation. Not given in 1929-1930. Given in alternate years.

HORT. 23 y. *Floricultural Practice* (4)—Two laboratories.

Practical experience in the various greenhouse operations of the fall, winter, and spring seasons.

HORT. 24 s. *Greenhouse Construction* (2)—One lecture; one laboratory.

The various types of houses; their location, arrangement, construction, and cost; principles and methods of heating; preparation of plans and specifications for commercial and private ranges. Not offered in 1929-1930. Given in alternate years.

HORT. 25 y. *Commercial Floriculture* (6)—Two lectures; one laboratory. Prerequisite, Hort. 22 y.

Cultural methods of florists' bench crops and potted plants, the marketing of the cut flowers, the retail store, a study of floral decoration. Not offered in 1930-1931. Given in alternate years.

HORT. 26 f. *Garden Flowers* (3)—Two lectures; one laboratory.

Plants for garden use; the various species of annuals, herbaceous perennials, bulbs, bedding plants and roses and their cultural requirements. Not offered in 1929-1930. Given in alternate years.

HORT. 27 s. *Floricultural Trip* (1)—Prerequisite, Hort. 22 y.

A trip occupying one week's time will be made through the principal floricultural sections, including Philadelphia and New York, visiting greenhouse establishments, wholesale markets, retail stores, nurseries, etc. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

D. Landscape Gardening

HORT. 31 s. *General Landscape Gardening* (2)—Two lectures.

The theory and general principles of landscape gardening and their application to private and public areas. Special consideration is given to the improvement and beautification of the home grounds, farmsteads, and small suburban properties. Adapted to students not intending to specialize in landscape, but who wish some theoretical and practical knowledge of the subject. Not offered in 1930-1931. Given in alternate years.

HORT. 32 f. *Elements of Landscape Design* (3)—One lecture; two laboratories. Prerequisite, Hort. 31 s.

A consideration of the principles of landscape design; surveys, mapping, and field work. Not offered in 1929-1930. Given in alternate years.

HORT. 33 s. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 32 f.

The design of private grounds and gardens and of architectural details used in landscape; planting plans; analytical study of plans of practicing landscape architects; field observation of landscape developments. Not offered in 1929-1930. Given in alternate years.

HORT. 34 f. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 33 s.

Continuation of course as outlined above. Not offered in 1930-1931. Given in alternate years.

HORT. 35 f. *History of Landscape Gardening* (1)—One lecture. Prerequisite, Hort. 31 s.

Evolution and development of landscape gardening; the different styles and a particular consideration of Italian, English, and American gardens. Not offered in 1929-1930. Given in alternate years.

HORT. 36 f. *Landscape Construction and Maintenance* (1)—One lecture or laboratory.

Methods of construction and planting; estimating; park and estate maintenance. Not offered in 1930-1931. Given in alternate years.

HORT. 37 s. *Civic Art* (2)—One lecture; one laboratory.

Principles of city planning and their application to village and rural improvement, including problems in design of civic center, parks, school grounds, and other public and semi-public areas. Not offered in 1930-1931. Given in alternate years.

E. General Horticulture Courses

HORT. 41 s. *Horticultural Breeding Practices* (1)—One laboratory. Senior year. Prerequisites, Genetics (Gen. 101), General Plant Physiology (Plt. Phy. 1 f.)

Practice in plant breeding, including pollination, hybridization, selection, note-taking, and the general application of the theories of heredity and selection to practice are taken up in this course.

HORT. 42 y. *Horticultural Research and Thesis* (4-6).

Advanced students in any of the four divisions of horticulture may select some special problem for individual investigation. This may be either the summarizing of all the available knowledge on a particular problem or the investigation of some new problem. Where original investigation is carried on, students should in most cases start the work during the junior year. The results of the research work are to be presented in the form of a thesis and filed in the horticultural library.

HORT. 43 y. *Horticultural Seminar* (2).

In this course papers are read by members of the class upon subjects pertaining to their research or thesis work or upon special problems assigned them. Discussions of special topics are given from time to time by members of the departmental staff.

For Advanced Undergraduates and Graduates

HORT. 101 f. *Commercial Fruit Growing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1 f.

The proper management of commercial orchards in Maryland. Advanced work is taken up on the subject of orchard culture, orchard fertilization,

picking, packing, marketing, and storing of fruits; orchard by-products, orchard heating, and orchard economics. (Whitehouse.) Not offered in 1930-1931. Given in alternate years.

HORT. 102 f. *Economic Fruits of the World* (2)—Two lectures. Prerequisites, Hort. 1 f and Hort. 101 f.

A study is made of the botanical ecological, and physiological characteristics of all species of fruit-bearing plants of economic importance, such as the date, pineapple, fig, olive, banana, nut-bearing trees, citrus fruits, and newly introduced fruits, with special reference to their cultural requirements in certain parts of the United States and the insular possessions. All fruits are discussed in this course which have not been discussed in a previous course. (Whitehouse.) Not offered in 1930-1931. Given in alternate years.

HORT. 103 f. *Tuber and Root Crops* (2)—One lecture; one laboratory. Prerequisites, Hort. 11 s and 12 f. Not offered in 1929-1930. Given in alternate years.

A study of white potatoes and sweet potatoes, considering seed, varieties, propagation, soils, fertilizers, planting, cultivation, spraying, harvesting, storing, and marketing.

HORT. 104 s. *Advanced Truck Crop Production* (1)—Prerequisites, Hort. 11 s, 12 f, and 13 s.

A trip of one week is made to the commercial trucking section of Maryland, Delaware, New Jersey, and Pennsylvania. A study of the markets in several large cities is included in this trip. Students are required to hand in a detailed report of this trip. The cost of such a trip should not exceed thirty dollars per student. The time will be arranged each year with each class.

HORT. 105 f. *Systematic Olericulture* (3)—Two lectures; one laboratory. Prerequisites, Hort. 11 s and 103 f. Not offered in 1930-1931. Given in alternate years.

A study of the classification and nomenclature of vegetables. Descriptions of varieties and adaptation of varieties to different environmental conditions.

HORT. 106 y. *Plant Materials* (5)—One lecture; one or two laboratories. Not offered in 1930-1931. Given in alternate years.

A field and laboratory study of trees, shrubs, and vines used in ornamental planting. (Thurston.)

For Graduates

HORT. 201 y. *Experimental Pomology* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in pomology; methods and difficulties in experimental work in pomology and results of experiments that have been or are being conducted in all experiment stations in this and other countries. (Auchter.)

HORT. 202 y. *Experimental Olericulture* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in vegetable growing; methods and difficulties in experimental work in vegetable production and results of experiments that have been or are being conducted in all experiment stations in this and other countries.

HORT. 203 s. *Experimental Floriculture* (2)—Two lectures.

A systematic study of the sources of knowledge and opinions as to practice in floriculture are discussed in this course. The results of all experimental work in floriculture which have been or are being conducted will be thoroughly discussed. (Thurston.)

HORT. 204 s. *Methods of Research* (2)—One lecture; one laboratory.

For graduate students only. Special drill will be given in the making of briefs and outlines of research problems, in methods of procedure in conducting investigational work, and in the preparation of bulletins and reports. A study of the origin, development, and growth of horticultural research is taken up. A study of the research problems being conducted by the Department of Horticulture will be made, and students will be required to take notes on some of the experimental work in the field and become familiar with the manner of filing and cataloging all experimental work. (Auchter.)

HORT. 205 y. *Advanced Horticultural Research and Thesis* (4, 6, or 8).

Graduate students will be required to select problems for original research in pomology, vegetable gardening, floriculture, or landscape gardening. These problems will be continued until completed, and final results are to be published in the form of a thesis. (Auchter, Geise, Schrader.)

HORT. 206 y. *Advanced Horticultural Seminar* (2).

This course will be required of all graduate students. Students will be required to give reports either on special topics assigned them, or on the progress of their work being done in courses. Members of the departmental staff will report special research work from time to time. (Auchter.)

Requirements of Graduate Students in Horticulture

Pomology—Graduate students specializing in Pomology who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 1 f, 2 f, 101 f, 102 f, 201 y, 204 s, 205 y, and 206 y; General Bio-chemistry 102 f; Plant Bio-chemistry 201 s; Plant Bio-physics 202 f, and Organic Chemistry (Chem. 8 y.)

Olericulture—Graduate students specializing in vegetable gardening who are planning to take an advanced degree will be required either to take or offer the equivalent of the following courses: Hort. 12 f, 13 s, 103 f, 105 f, 202 y, 204 s, 205 y, and 206 y; General Bio-chemistry 102 f; Plant Bio-chemistry 201 s; Plant Bio-physics 202 f, and Organic Chemistry (Chem. 8 y.)

Floriculture—Graduate students specializing in floriculture who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 22 y, 23 y, 24 s, 25 y, 26 f, 203 s, 204 s, 205 y, and 206 y; General Biochemistry 102 f; Plant Biophysics 202 f;

Plant Biochemistry 201 s; Botany 103 f or s, and Organic Chemistry (Chem. 8 y).

Landscape Gardening—Graduate students specializing in landscape gardening who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 32 f, 33 s, 35 f, 105 f, 204 s, and 206 y; Botany 103 f or s; Drafting 1 y and 2 y, and Plane Surveying 1 f and 2 s.

Additional Requirements—In addition to the above required courses, all graduate students in horticulture are advised to take physical and colloidal chemistry.

Unless graduate students in Horticulture have had some course work in entomology, plant pathology, genetics, and biometry, certain of these courses will be required.

Note: For courses in Biochemistry and Biophysics, see Plant Physiology.

LATIN

PROFESSOR SPENCE.

LAT. 1 f. *Elementary Latin* (4)—Four lectures.

This course is offered to cover a substantial and accurate course in Grammar and Syntax, with translation of simple prose. It is substantially the equivalent of one entrance unit in Latin.

LAT. 2 s. *Translation and Prose Composition* (4)—Four lectures. Prerequisite, Lat. 1 f or its equivalent. Substantially the equivalent of a second entrance unit in Latin.

Texts will be selected from the works of Caesar and Sallust.

LAT. 3 f. (4)—Four lectures. Prerequisite, Lat. 2 s or two entrance units in Latin.

Texts will be selected from Virgil, with drill on prosody.

LAT. 4 s. (4)—Four lectures. Prerequisite, Lat. 3 f or three entrance units in Latin.

Selections from Cicero's orations, with parallel reading of the world's masterpieces of oratory.

LIBRARY SCIENCE

MISS GRACE BARNES, MISS GERTRUDE BERGMAN, MR. GEORGE FOGG.

L. S. 1 f. *Library Methods* (1)—Freshman year. Required of all students registered in the College of Arts and Sciences. Elective for others.

This course is intended to help students use the library with greater facility. Instruction will be given by practical work with the various catalogs, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much-used reference books which the student will find helpful throughout his college course.

MATHEMATICS

PROFESSORS T. H. TALIAFERRO, GWINNER; ASSISTANT PROFESSORS SPANN, DANTZIG; MR. ALRICH, MR. LLOYD.

MATH. 1 f. *Algebra* (3)—Three lectures. Required of Pre-medical, Pre-dental, Business Administration, and certain Chemistry students. Alternative for students in the College of Arts and Sciences. Elective for other students. Prerequisite, Algebra to Quadratics.

This course includes the study of quadratics, simultaneous quadratic equations, graphs, progressions, elementary theory of equations, binomial theorem, permutations, combinations, etc.

MATH. 2 s. *Plane Trigonometry* (3)—Three lectures. Required of Pre-medical, Pre-dental, Business Administration, and certain Chemistry students. Alternative for students in the College of Arts and Sciences. Elective for other students. Prerequisites, Math. 1 f and Plane Geometry.

A study of the trigonometric functions and the deduction of formulas with their application to the solution of triangles and trigonometric equations.

MATH. 3 f. *Trigonometry; Advanced Algebra* (5)—Five lectures. Required of Freshmen in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisites, Algebra completed and Solid Geometry.

Advanced Algebra includes a rapid review of algebra required for entrance, elementary theory of equations, binomial theorem, permutations, combinations, and other selected topics.

Trigonometry includes trigonometric functions, the deduction of formulas and their application to the solution of plane triangles, trigonometric equations, spherical triangles, etc.

This course will be repeated during the second semester.

MATH. 4 s. *Analytic Geometry* (5)—Five lectures. Required of students in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 3 f.

This course includes a study of the curve and equation, the straight line, the conic sections, empirical equations, transcendental curves, the plane and the straight line in space, and the quadric surfaces. An opportunity is afforded to take this course during the summer.

MATH. 5 f. *Plane Analytic Geometry* (3)—Three lectures. Required of students in Chemistry other than Industrial Chemistry. Elective for other students. Prerequisites, Math. 1 f and 2 s.

Plane analytic geometry includes the study of the loci of equations in two variables, the straight line, conic sections and transcendental curves, and the development of empirical equations from graphs.

MATH. 6 s. *Calculus* (3)—Three lectures. Required of students in Chemistry other than Industrial Chemistry. Elective for other students. Prerequisite, Math. 5 f.

Calculus includes the study of the methods of differentiation and integration and the application of these methods in determining maxima and minima, areas, length of curves, etc., in the plane.

MATH. 7 y. *Calculus; Elementary Differential Equations* (10)—Five lectures. Required of Sophomores in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 4 s.

Calculus is studied throughout the year. In the second semester several weeks are devoted to the study of elementary differential equations.

Calculus includes a discussion of the methods of differentiation and integration and the application of these methods in determining maxima and minima, areas, length of curves, etc., in the plane; and the determination of areas, volume, etc., in space.

For Advanced Undergraduates and Graduates

MATH. 101 f. *The Mathematical Theory of Investment* (3)—Three lectures. To be followed by Math. 102 s. Open to Juniors and Seniors. Required of students in Business Administration.

The application of mathematics to financial transactions; compound interest and discount, construction and use of interest tables; sinking funds, annuities, depreciation, valuation and amortization of securities, building and loan associations, life insurance, etc. (Alrich.)

MATH. 102 s. *Elements of Statistics* (3)—Three lectures. A continuation of Math. 101 f. Prerequisite, Math. 101 f. Open to Juniors and Seniors. Required of students in Business Administration.

A study of the fundamental principles used in statistical investigation. (Alrich.)

MATH. 103 f. *Differential Equations* (3)—Three lectures. Elective. Prerequisite, Math. 6 s or Math. 7 y.

Integration of ordinary differential equations. Total differential equations and partial differential equations are also considered. (Dantzig.)

MATH. 104 s. *Differential Geometry* (3)—Three lectures. Elective. Prerequisite, Math. 6 s or 7 y.

Application of the calculus to plane and skew curves. Theory of Surfaces. (Dantzig.)

MATH. 105 f. *Advanced Algebra* (3)—Three lectures. Elective.

Matrices and determinants. Invariants. Linear Substitutions. Finite Groups. Quadratic Forms. Theory of Equations. (Dantzig.) Not given 1929-1930.

MATH. 106 s. *Advanced Topics in Geometry* (3)—Three lectures. Elective.

Homogeneous Co-ordinates. Principles of Projective Geometry. Theory of Algebraic Curves. Infinite Groups. (Dantzig.) Not given 1929-1930.

MATH. 107 f. *Functions of a Complex Variable* (3)—Three lectures. Elective.

Theory of Functions. Conformal Transformations. Development into Series. Applications to Integral Calculus. (Dantzig.)

MATH. 108 s. *Theoretical Mechanics* (3)—Three lectures. Elective. Statics, Kinematics, and Dynamics. Vector and Tensor Calculus. (Dantzig.)

MATH. 109 y. *Selected Topics in Mathematics* (4)—Two lectures. Elective.

The purpose of the course is to enable advanced students in Physics, Chemistry, Biology, and Economics to understand such mathematics as is encountered in modern scientific literature in the fields named. The course begins with a review of general college mathematics from a mature standpoint. Applications to various problems of thermodynamics, physical chemistry, economic and biometric statistics will be made for illustrative purposes. (Dantzig.) Not given in 1929-1930.

MATH. 110 y. *Applied Mathematics* (6)—Two lectures and one seminar. Principles and methods used in the mathematical problems encountered in the Applied Sciences. This course is intended for advanced students in Science and Engineering, and aims to train them in the mathematical formulation of problems in which they are engaged and in the practical solution of these problems. Numerous applications will be considered. (Dantzig.)

MILITARY SCIENCE AND TACTICS

PROFESSOR LYTLE; ASSISTANT PROFESSORS SCOBEE, BOWES, YOUNG;
MR. McMANUS, MR. HENDRICKS.

M. I. 1 y. *Basic R. O. T. C.* (2)—Freshman year.
The following subjects are covered:

First Semester

Military Courtesy, Command and Leadership, Physical Drill, Military Hygiene and First Aid.

Second Semester

Physical Drill, Military Hygiene and First Aid, Command and Leadership, Marksmanship.

M. I. 2 y. *Basic R. O. T. C.* (4)—Sophomore year.
The following subjects are covered:

First Semester

Musketry, Command and Leadership, Scouting and Patrolling.

Second Semester

Interior Guard Duty, Automatic Rifle, Command and Leadership.

M. I. 101 y. *Advanced R. O. T. C.* (6)—Junior year.
The following subjects are covered:

First Semester

Infantry Weapons (Machine Guns), Command and Leadership.

Second Semester

Infantry Weapons (Machine Guns, 37 m/m Gun and 3-inch Trench Mortar), Military Sketching and Map Reading, Military Field Engineering, Command and Leadership, Combat Principles.

M. I. 102 y. *Advanced R. O. T. C.* (6)—Senior year.

The following subjects are covered:

First Semester

Combat Principles, Command and Leadership.

Second Semester

Combat Principles, Administration, Command and Leadership, Military Law, Rules of Land Warfare, Military History, and National Defense Act.

MODERN LANGUAGES

PROFESSOR ZUCKER; ASSOCIATE PROFESSOR KRAMER; ASSISTANT
PROFESSOR DEFERRARI; MISS ROSASCO, MR. MILLER,
MR. PARSONS.

In the elementary instruction in languages a differentiation is introduced between students whose chief interest lies in science and those who are studying a language for cultural purposes or with the aim of becoming teachers in this field. For the latter an additional two-hour course in pronunciation and conversation is offered in the second semester, while the former take only the three-hour course designed to give simply a reading knowledge.

Students in the College of Education and in the College of Arts and Sciences (except those carrying special curricula outlined in Section I) will not receive credit for the elementary language course unless they have successfully completed the full eight hours of the first year work.

A. French

FRENCH 1 y. *Elementary French* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

Elements of grammar; composition, pronunciation, and translation.

FRENCH 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Fr. 1 y. (See paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

FRENCH 3 y. *Second-Year French* (6)—Three lectures. Prerequisite, French 1 y and 2 s or equivalent.

Study of grammar continued; composition, conversation, translation. Texts selected from modern prose.

FRENCH 4 y. *The Development of the French Novel* (6)—Three lectures and reports.

Introductory study of the history and growth of the novel in French literature; of the lives, work, and influence of various novelists.

This course and the two following ones are offered in successive years.

FRENCH 5 y. *The Development of the French Drama* (6)—Three lectures and reports.

Introductory study of the French drama of the seventeenth, eighteenth, and nineteenth centuries. Translation and collateral reading. (Offered 1930-1931.)

FRENCH 6 f. *Readings in Contemporary French* (3)—Two lectures. Translation; collateral reading; reports on history, criticism, fiction, drama, lyric poetry. (Offered 1931-1932.)

FRENCH 7 s. *Readings in Contemporary French*. (Continuation of French 6 f.) (3)—Two lectures. (Offered 1931-1932.)

FRENCH 8 f. *French Phonetics* (2)—Two lectures.

FRENCH 9 s. *French Grammar and Composition* (2)—Two lectures. (French 8 f and 9 s are required of students preparing to teach French.)

For Advanced Undergraduates and Graduates

(French 4 y, 5 y, or 6 f, and 7 s, or equivalent are prerequisite for courses in this group.)

FRENCH 101 f. *History of French Literature in the Seventeenth Century* (3)—Three lectures. (Deferrari.) (Not given 1929-1930.)

FRENCH 102 s. *History of French Literature in the Eighteenth Century* (3)—Three lectures. (Deferrari.) (Not given 1929-1930.)

FRENCH 103 f. *History of French Literature in the Nineteenth Century* (3)—Three lectures. (Deferrari.) Not given 1929-1930.

FRENCH 104 s. *History of French Literature in the Nineteenth Century* (Continuation of French 103 f.) (3)—Three lectures. (Deferrari.) Not given 1929-1930.

FRENCH 105 f. *The Renaissance in France* (3) Study of the literature of the period—Three lectures. (Deferrari.)

FRENCH 106 s. *The Renaissance in France* (3) Continuation of French 105 f—Three lectures. (Deferrari.)

For Graduates

FRENCH 201 y. *Introduction to French Philology* (6)—Three lectures. (Deferrari.)

FRENCH 202 y. *Research and Thesis*. Credits determined by work accomplished. (Deferrari.)

Attention is also called to Comparative Literature 105, *Romanticism in France, Germany, and England*.

B. German

GERMAN 1 y. *Elementary German* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in German for entrance, but whose preparation is not adequate for second-year German, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

GERMAN 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements German 1 y (see paragraph 2, Department of Modern Languages). In it special emphasis is laid on pronunciation and conversation.

GERMAN 3 y. *Second-Year German* (6)—Three lectures. Prerequisite, German 1 y and 2 s or equivalent.

Reading of narrative and technical prose, grammar review, oral and written practice.

GERMAN 4 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent.

Rapid reading of modern dramas and novels by Hauptmann, Sudermann, Fulda, Frenssen, Ernst, and others.

GERMAN 5 s. *Advanced German* (3)—Three lectures. Continuation of German 4 f.

For Advanced Undergraduates and Graduates

(Prerequisite for courses in this group, German 4 and 5 or equivalent.)

GERMAN 101 f. *German Literature of the Eighteenth Century* (3)—Three lectures. (Zucker.) The earlier classical literature. (Not given in 1929-1930.)

GERMAN 102 s. *German Literature in the Eighteenth Century* (3)—Three lectures. (Zucker.) The later classical literature. (Not given 1929-1930.)

GERMAN 103 f. *German Literature of the Nineteenth Century* (3)—Three lectures. Romanticism and Young Germany. (Zucker.)

GERMAN 104 s. *German Literature of the Nineteenth Century* (3)—Three lectures. The literature of the Empire. (Zucker.)

GERMAN 205 y. *Research and Thesis*—Credits determined by work accomplished. (Zucker.)

Attention is also called to Comparative Literature 105, *Romanticism in France, Germany, and England*.

C. Spanish

SPANISH 1 y. *Elementary Spanish* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in

Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

SPANISH 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Spanish 1 y (see paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

SPANISH 3 y. *Second-Year Spanish* (6)—Three recitations. Prerequisite, Spanish 1 y and 2 s or equivalent.

Reading of narrative works and plays; grammar review; oral and written practice.

SPANISH 4 y. *History of Spanish Literature* (6)—Three recitations. Prerequisite, Spanish 3 y or equivalent.

General survey of Spanish literature up to the Twentieth Century.

SPANISH 5 f. *Spanish Conversation and Composition* (2)—Two lectures.

SPANISH 6 s. *Spanish Conversation and Composition*. (Continuation of Spanish 5 f.) (2)—Two lectures.

For Advanced Undergraduates and Graduates

SPANISH 101 f. *Masterpieces of Spanish Literature* (3)—Three lectures. (Deferrari.) (Not given 1929-1930.)

SPANISH 102 s. *Masterpieces of Spanish Literature*. (Continuation of Spanish 101 f.) (3)—Three lectures. (Deferrari.) (Not given 1929-1930.)

SPANISH 103 y. *Introduction to Spanish Philology* (6)—Three lectures. (Deferrari.)

D. Comparative Literature

For Advanced Undergraduates and Graduates

The courses in Comparative Literature are, for the time being, under the direction of the Department of Modern Languages. They may be elected as partially satisfying major and minor requirements in this department. Comparative Literature 101 f, 102 s, 104 s, and 105 y may also be counted toward a major or minor in English.

COM. LIT. 101 f. *Introduction to Comparative Literature* (3)—Three lectures.

Survey of the background of European literature through study in English translation of Greek and Latin literature. Special emphasis is laid on the development of the epic, tragedy, comedy, and other typical forms of literary expression. The debt of modern literature to the ancients is discussed and illustrated. (Zucker.)

COM. LIT. 102 s. *Introduction to Comparative Literature* (3)—Three lectures.

Continuation of 101 f; study of medieval and modern Continental literature. (Zucker.)

COM. LIT. 104 s. *The Modern Ibsen*. Lectures on the life of Ibsen and the European drama in the middle of the Nineteenth Century. Study of Ibsen's social and symbolical plays in Archer's translation. (Zucker.)

COM. LIT. 105 y. *Romanticism in France, Germany, and England* (6)—Two lectures and reports.

Introduction to the chief authors of the Romantic movement in England, France, and Germany, the latter two groups being read in English translation. Lectures on the chief thought currents and literary movements of the late eighteenth and early nineteenth centuries. First semester: Rousseau to Gautier; Buerger to Heine. Second semester: Wordsworth, Coleridge, Landor, Byron, Shelley, Keats, and others. The course is conducted by members of both the Modern Language and the English departments. (Deferrari, Zucker, Hale.)

MUSIC

MR. GOODYEAR.

MUSIC 1 y. *Music Appreciation* (2).

A study of all types of classical music with a view to developing the ability to listen and enjoy. Lecture recitals will be presented with the aid of performers and records. A study of the orchestra, the instruments that it employs. The development of the symphony and orchestra instruments for solo performance. The development of the opera and oratorio. Great singers of the past and present. (Goodyear.)

MUSIC 2 y. *University Chorus* (2).

Study of part-songs, cantatas, and oratorios. Credit is awarded for regular attendance at weekly rehearsals, and participation in public performances of the chorus.

Students admitted who have ability to read and sing music of the grade of easy church hymns. No student may receive more than four credits for work in University Chorus. (Goodyear.)

MUSIC 3 y. *University Orchestra* (1 credit for each semester satisfactorily completed).

The purpose of the University Orchestra is study of the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students are eligible for membership who play orchestral instruments. At least one rehearsal of two hours duration is held each week, and all players are expected to take part in public performances. (Goodyear.)

MUSIC 4 f. *History of Music* (2)—One lecture.

A comprehensive course in the history of music covering the development of all forms of music from ancient times through the period of the renaissance; the classic and the romantic schools and the more modern composers. (Goodyear.)

(For courses in Voice and Piano, see under College of Arts and Sciences.)

PHILOSOPHY

PROFESSOR SPENCE.

For Advanced Undergraduates and Graduates

PHIL. 101 f. *Introduction to Philosophy* (3)—Three lectures and assignments.

A study of the meaning and scope of philosophy; its relation to the arts, sciences, and religion. To be followed by Phil. 102 s.

PHIL. 102 s. *Problems and Systems of Philosophy* (3)—Three lectures and reports on the reading of representative works. Prerequisite, Phil. 101 f.

Study of the problems and systems of philosophy, together with tendencies of present-day thought.

PHIL. 104 y. *History of Philosophy* (6)—Three lectures. Senior standing required.

A study of the development of philosophy from prehistoric times, through Greek philosophy, early Christian philosophy, medieval philosophy to modern philosophical thought. (May be omitted in 1929-1930.)

MYTH. 101 s. *Mythology* (1)—One lecture.

Origin and reason of folklore and myth. Comparison of myths, mythology and modern thought.

PHYSICAL EDUCATION FOR WOMEN

MISS STAMP.

PHYS. ED. 1 y. *Physical Education and Personal Hygiene* (2)—Freshman course required of all women.

This course consists of instruction in hygiene, one period a week, and physical training activities, two periods a week throughout the year.

A. *Personal Hygiene*. The health ideal and its attainment; care of the body relative to diet, exercise, sleep, bathing, etc., and social hygiene.

B. *Physical Activities*. The aim is to adapt the physical activities to the needs of groups and individuals. Gymnastic practice, indoor and outdoor games, sports, and athletics are provided. The repertory of games and sports is as follows: basketball, hiking, rifle shooting, swimming, tennis, and track and field events.

PHYS. ED. 2 y. *Physical Education and General Hygiene* (4)—Sophomore course required of all women.

This course is a continuation of the freshman course. The work in hygiene includes the elements of physiology; the elements of home, school, community hygiene; and a continuation of social hygiene. The program of physical activities is essentially the same as in the first year.

PHYSICS

PROFESSOR EICHLIN; MR. CLARK.

PHYS. 1 y. *Arts Physics* (8)—Three lectures; one laboratory. Prerequisites, Math. 1 f and 2 s.

A study of the physical phenomena in mechanics, heat, sound, magnetism, electricity, and light. Required of students in the Pre-medical and Chemistry curricula. Elective for other students.

PHYS. 2 y. *Engineering Physics* (10)—Four lectures; one laboratory. Prerequisites, Math. 3 f and 4 s.

A study of mechanics, heat, sound, magnetism, electricity, and light. Required of all students in Engineering. Elective for other students.

PHYS. 3 s. *Special Applications of Physics* (4)—Three lectures; one laboratory.

This course consists of a discussion of the laws and theories of physics from the viewpoint of their practical applications. Especially for students in Home Economics.

PHYS. 4 y. *Physics Problems* (2)—One lecture. Prerequisite, Phys. 1 y.

A problem course supplementary to Phys. 1 y. Required of students in Chemistry with credit for Phys. 1 y.

For Advanced Undergraduates and Graduates

PHYS. 101 f. *Physical Measurements* (3)—Two lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

This course is designed for the study of physical measurements and for familiarizing the student with the manipulation of the types of apparatus used in experimentation in physical problems. (Clark.)

PHYS. 102 y. *Graphic Physics* (2)—One lecture. Prerequisite, Phys. 1 y or 2 y.

A study of physical laws and formulae by means of scales, charts, and graphs. (Eichlin.)

PHYS. 103 f. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of Mechanics and Molecular Physics. (Not given in 1929-1930.)

PHYS. 104 s. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of wave motion, sound, and heat. (Not given in 1929-1930.)

PHYS. 105 f. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of electricity and magnetism. (Eichlin.)

PHYS. 106 s. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of optics. (Eichlin.)

PHYS. 107 y. *Specialized Physics* (6)—Three lectures. Prerequisite, Phys. 1 y or 2 y.

A study of physical phenomena in optics, spectroscopy, conduction of electricity through gases, etc. (Eichlin.)

For Graduates

PHYS. 201 y. *Modern Physics* (6)—Three lectures.

A study of some of the problems encountered in modern physics. (Eichlin.)

PLANT PATHOLOGY

PROFESSORS NORTON, TEMPLE; MR. MOYER.*

(For other Botanical Courses see Botany and Plant Physiology)

PLT. PATH. 1 f. *Diseases of Plants* (3)—Two lectures; one laboratory. Prerequisite, Gen. Bot. 1 f or s.

An introductory study in the field, in the laboratory, and in the literature, of symptoms, casual organisms, and control measures of the diseases of economic crops.

For Advanced Undergraduates and Graduates

PLT. PATH. 101 s. *Diseases of Fruits* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1 f. Not offered in 1930-1931.

An intensive study intended to give a rather thorough knowledge of the subject matter, such as is needed by those who expect to become advisers in fruit production, as well as those who expect to become specialists in plant pathology.

PLT. PATH. 102 s. *Diseases of Garden and Field Crops* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1 f. Not offered in 1929-1930.

The diseases of garden crops, truck crops, cereal and forage crops. Intended for students of vegetable culture, agronomy, and plant pathology, and for those preparing for county agent work.

PLT. PATH. 103 f. *Research Methods* (2)—One conference and five hours of laboratory and library work. Prerequisite, Plt. Path. 1 f or equivalent.

Technique of plant disease investigations: sterilization, culture media, isolation of pathogens, inoculation methods, single-spore methods, disinfectants, fungicides, photography, preparation of manuscripts, and the literature in the scientific journals and bulletins on these subjects. (Temple.)

PLT. PATH. 104 f and s. *Minor Investigations*—Credit according to work done. A laboratory course with an occasional conference. Prerequisite, Plt. Path. 1 f.

* All on part time teaching.

In this course the student may enter or withdraw at any time, including the summer months, and receive credit for the work accomplished. The course is intended primarily to give practice in technique so that the student may acquire sufficient skill to undertake fundamental research. Only minor problems or special phases of major problems may be undertaken. Their solution may include a survey of the literature on the problem under investigation and both laboratory and field work. (Temple and Norton.)

PLT. PATH. 105 s. *Diseases of Ornamentals* (2)—One lecture; one laboratory. Not offered in 1929-1930.

The most important diseases of plants growing in greenhouse, flower garden, and landscape, including shrubs and shade trees. (Temple.)

PLT. PATH. 106 y. *Seminar* (1).

Conferences and reports on plant pathological literature and on recent investigations. (Temple.)

PLT. PATH. 107 f. *Plant Disease Control* (3)—Two lectures; one laboratory. Prerequisite, Plt. Path. 1 f.

An advanced course dealing with the theory and practice of plant disease control; the preparation of sprays and other fungicides and the testing of their toxicity in greenhouse and laboratory; demonstration and other extension methods adapted to county agent work and to the teaching of agriculture in high schools. (Jehle, Temple, Hunter.)

PLT. PATH. 108 f. *Plant Disease Identification*—Credit according to work accomplished. A laboratory and field study with conferences.

An extensive study of symptomatology and mycology leading to the identification of pathogens and the diseases caused by them. (Norton, Temple.)

PLT. PATH. 109 f or s. *Pathogenic Fungi* (2-5)—One lecture and one or more laboratory periods, according to credit. Prerequisites, Bot. 1 f or s and Bact. 1 f or s. Not offered in 1929-1930.

A detailed treatment of the classification, morphology, and economics of the fungi, with studies of life histories in culture; identification of field materials. (Norton.)

For Graduates

PLT. PATH. 201 f. *Virus Diseases* (2)—Two lectures. Not offered 1930-1931.

An advanced course dealing with the mosaic and similar or related diseases of plants, including a study of the current literature on the subject and the working of a problem in the greenhouse. (Temple.)

PLT. PATH. 203 f. *Non-Parasitic Diseases* (3)—Two lectures; one laboratory. Not offered in 1930-1931.

Effects of maladjustment of plants to their environment; injuries due to climate, soil, gases, dusts and sprays, fertilizers; improper treatment and other detrimental conditions. (Norton.)

PLT. PATH. 205 y. *Research*—Credit according to work done. (Norton, Temple.)

PLANT PHYSIOLOGY AND BIOCHEMISTRY

PROFESSOR APPLEMAN; ASSOCIATE PROFESSOR JOHNSTON;

ASSISTANT PROFESSOR CONRAD; MR. SMITH.

(For other Botanical courses see Botany and Plant Pathology)

PLT. PHY. 1 f. *General Plant Physiology* (4)—Two lectures; two laboratories. Prerequisite, Gen. Bot. 1 f or s.

Water requirements, principles of absorption, mineral nutrients, transpiration, synthesis of food, metabolism, growth, and movements.

For Advanced Undergraduates and Graduates

PLT. PHY. 101 s. *Plant Ecology* (3)—One lecture; two laboratories. Prerequisite, Bot. 1 f or s.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected.

BIOCHEM. 102 f. *General Biochemistry* (4)—Two lectures; two laboratories. Prerequisites, General Chemistry (Chem. 1 y), Analytical Chemistry (Chem. 7 y) or their equivalents; also an elementary knowledge of organic chemistry.

A general course in chemical biology treated from the point of view of both plants and animals. The first half of the course is devoted to the chemistry of protoplasm and its products. The second half of the course deals with cell metabolism, and embraces processes and problems of fundamental importance in both animal and plant life. Not given every year. (Appleman, Conrad.)

PLT. PHYS. 103 f. *Plant Microchemistry* (2)—One lecture; one laboratory. Prerequisites, Bot. 1 f or s, Chem. 1 y, or equivalents.

The isolation, identification, and localization of organic and inorganic substances found in plant tissues by micro-technical methods. The use of these methods in the study of metabolism in plants is emphasized. (Conrad.)

For Graduates

PLT. PHYS. 201 s. *Plant Biochemistry* (3)—Two lectures; one or two laboratories. Prerequisites, Biochem. 102 f or Chem. 104 f and an elementary knowledge of plant physiology.

An advanced course on the chemistry of plant life. It deals with materials and processes characteristic of plant life. Primary syntheses and the transformations of materials in plants and plant organs are especially emphasized. (Appleman, Conrad.)

PLT. PHYS. 202 f. *Plant Biophysics* (3)—Two lectures; one laboratory. Prerequisites, one year's work in physics and an elementary knowledge of physical chemistry and plant physiology.

An advanced study of the operation of physical forces in plant physiological processes. The relation of climatic conditions to plant growth and practice in recording meteorological data constitute a part of the course. (Johnston.)

PLT. PHYS. 203 s. *Special Problems of Growth and Development* (2)—Not given every year. (Appleman, Johnston.)

PLT. PHYS. 204 y. *Seminar* (2).

The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject.

PLT. PHYS. 205 y. *Research*—Credit hours according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Johnston.)

POULTRY HUSBANDRY

PROFESSOR WAITE, ASSISTANT PROFESSOR QUIGLEY.

POULTRY 1 s and 101 s. *Farm Poultry* (3)—Two lectures; one laboratory.

A general course in poultry raising, including housing, feeding, incubation, brooding, breeds, breeding, selection of stock, culling, general management, and marketing.

POULTRY 102 f. *Poultry Keeping* (4)—Two lectures; two laboratories. Prerequisite, Poultry 101 s.

A study of housing and yarding, practice in making poultry house plans, feeding, killing, and dressing.

POULTRY 103 s. *Poultry Production* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s and 102 f.

The theory and practice of incubation and brooding, both natural and artificial. Study of incubators and brooders, assembling, etc. Considerable stress will be placed on the proper growing of chicks into good laying pullets. General consideration of poultry disease. Caponizing.

POULTRY 104 f. *Poultry Breeds* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s, 102 f and 103 s.

A study of the breeds of poultry, the judging of poultry, fitting for exhibition, and the methods of improvement by breeding.

POULTRY 105 s. *Poultry Management* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s, 102 f, 103 s, and 104 f.

A general fitting together and assembling of knowledge gained in the previous courses. Culling, marketing, including both selling of poultry products and the buying of supplies, keeping poultry accounts, a study of poultry profits, how to start.

PSYCHOLOGY

ASSOCIATE PROFESSOR SPROWLS.

PSYCH. 1 f or s. *Elements of Psychology* (3)—Two lectures and one conference. Seniors in this course receive but two credits.

The concept of consciousness as dependent upon the reactions of the individual is applied to the problems of human behavior. In this course the fundamental facts and principles of mental life are presented as a basis, not only for better understanding the behavior of others, but also for the intelligent use of individual capacities and the formation of desirable personality and character traits. This course is given in both the first and second semesters.

See "Education" for description of the following courses:

ED. 101 f. *Educational Psychology* (3).

ED. 106 s. *Advanced Educational Psychology* (3).

ED. 107 f. *Educational Measurements* (3).

ED. 108 s. *Mental Hygiene* (3).

PUBLIC SPEAKING

PROFESSOR RICHARDSON; MR. WATKINS.

P. S. 1 y. *Reading and Speaking* (2)—One lecture.

The principles and technique of oral expression; enunciation, emphasis, inflection, force, gesture, and the preparation and delivery of short original speeches. Impromptu speaking. Theory and practice of parliamentary procedure.

P. S. 2 f. *Advanced Public Speaking* (2)—Two lectures.

Advanced work on basis of P. S. 1 y, with special applications and adaptations. At each session of the class a special setting is given for the speeches—civil, social, and political organizations, etc., and organizations in the field of the prospective vocation of the different students. When a student has finished this course he will have prepared and delivered one or more speeches which would be suitable and appropriate before any and all bodies that he would probably have occasion to address in after-life.

P. S. 2 s. *Advanced Public Speaking* (2)—Two lectures. Continuation of P. S. 2 f.

P. S. 3 y. *Oral Technical English* (2)—One lecture.

The preparation and delivery of speeches, reports, etc., on both technical and general subjects. Argumentation. This course is especially adapted to the needs of engineering students and is co-ordinated with the seminars of the College of Engineering.

P. S. 4 y. *Advanced Oral Technical English* (2)—One lecture.

This course is a continuation with advanced work of P. S. 3 y. Much attention is given to parliamentary procedure. Some of the class programs are prepared by the students and carried out under student supervision. For junior engineering students only.

P. S. 5 y. *Advanced Oral Technical English* (2)—One lecture.

Advanced work on the basis of P. S. 4 y. Work not confined to class room. Students are encouraged to deliver addresses before different bodies in the University and elsewhere. Senior seminar. For senior engineering students only.

P. S. 7 f. *Extempore Speaking* (1)—One lecture.

Much emphasis on the selection and organization of material. Class exercises in speaking extemporaneously on assigned and selected subjects. Newspaper and magazine reading essential.

P. S. 8 s. *Extempore Speaking* (1)—One lecture.

Continuation of P. S. 7 f.

P. S. 9 f. *Debate* (2)—Two lectures.

A study of the principles of argumentation. A study of masterpieces in argumentative oratory. Class work in debating. It is advised that those who aspire to intercollegiate debating should take this course.

P. S. 10 s. *Argumentation* (2)—Two lectures.

Theory and practice of argumentation and debate. Similar to course P. S. 9 f. This course is offered for the benefit of those who may find it impracticable to take this work in the first semester.

P. S. 11 f. *Oral Reading* (2)—Two lectures.

A study of the technique of vocal expression. The oral interpretation of literature. The practical training of students in the art of reading.

P. S. 12 s. *Oral Reading* (2)—Two lectures.

Continuation of P. S. 11 f.

ZOOLOGY AND AQUICULTURE

PROFESSORS PIERSON, TRUITT; ASSISTANT PROFESSOR MCCONNELL;
MR. BURHOE.

ZOOL. 1 f or s. *General Zoology* (4)—Two lectures; two laboratories.

This course is cultural and practical in its aims. It deals with the basic principles of animal development, morphology, relationships, and activities which are valuable for a proper appreciation of the biological and the social sciences.

ZOOL. 2 f. *Elements of Zoology* (4)—Two lectures; two laboratories.

Emphasis is given to the fundamentals of the biology of vertebrates with the frog as an example. The functions of the organ systems of man are reviewed. This course with Zool. 3 s satisfies the pre-medical requirements in biology. Freshmen who intend to choose zoology as a major should register for Zool. 2 f and Zool. 3 s.

ZOOL. 3 s. *Elements of Zoology* (4)—Two lectures; two laboratories. Prerequisite, Zool. 2 f. Continuation of Zool. 2 f.

Students with credit for Zool. 1 f or s are not eligible for this course, but may be admitted to Zool. 2 f.

Presents many of the primary biological concepts and generalizations through the study of typical one-celled and the simpler many-celled animals.

ZOOL. 4 s. *Economic Zoology* (2)—Two lectures. Prerequisite, one course in Zoology or Botany 1 f or s.

The content of this course will center around the problems of preservation, conservation, control, and development of the economic wild life of Maryland, especially the blue crab and oyster. The lectures will be supplemented by assigned readings and reports.

ZOOL. 5 f. *The Invertebrates* (3)—One lecture; two laboratories. Prerequisite, Zool. 1 f or s.

This course consists in a study of the morphology and relationships of the principal invertebrate phyla.

ZOOL. 6 s. *Field Zoology* (3)—One lecture; two laboratories.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with special emphasis placed upon insects and certain vertebrates, their breeding habits, environment, and economic importance.

ZOOL. 8 f. *Comparative Vertebrate Morphology* (4)—Two lectures; two laboratories. Prerequisite, Zool. 2 f or 5 f.

Required of pre-medical students. A comparative study of selected organ systems in some of the classes.

ZOOL. 12 s. *Normal Animal History* (3)—One lecture; two laboratories. Prerequisite, Zool. 1 f or s or equivalent.

This course covers the general field of animal histology and is not restricted to mammalian forms. Thus, although it presents a good background for medical histology, it offers a broad foundation of general histology for the student whose major is zoology. (Number limited to twenty.)

ZOOL. 16 f or s. *Advanced Comparative Vertebrate Morphology* (2)—Two laboratories. Schedule to be arranged. Prerequisite, Zool. 8 f or its equivalent.

This is a continuation of Zool. 8 f., but will consist of laboratory work only. A maximum opportunity is offered to develop initiative and the spirit of investigation.

For Advanced Undergraduates and Graduates

ZOOL. 101 s. *Embryology* (4)—Two lectures; two laboratories. Prerequisite, two semesters of biology, one of which should be in this department. Required of three-year pre-medical students.

The development of the chick to the end of the fourth day. (Pierson, McConnell.)

ZOOL. 102 y. *Mammalian Anatomy* (2-3)—A laboratory course. Prerequisite, one year of zoology.

A thorough study of the gross anatomy of the cat or other mammal. Open to a limited number of students. The permission of the instructor in charge should be obtained before registering for this course. Schedule to be arranged. (Pierson.)

ZOOL. 105 y. *Aquiculture* (2)—Lectures and laboratory to be arranged. Prerequisites, one course in general zoology and one in general botany.

Plankton studies and the determination of other aquatic life of nearby streams and ponds. Morphology and ecology of representative commercial and game fishes in Maryland, the Chesapeake blue crab, and the oyster. (Truitt.)

ZOOL. 110 s. *Organic Evolution* (2)—Two lectures. Prerequisites, two semesters of biological science, one of which must be in this department.

The object of this course is to present the zoological data on which the theory of evolution rests. The lectures will be supplemented by discussion, collateral reading, and reports. (Pierson.)

ZOOL. 115 y. *Vertebrate Zoology*—Credit hours and schedule to be arranged to suit the individual members of the class.

Each student may choose, within certain limits, a problem in taxonomy, morphology, or embryology. (Pierson, McConnell.)

ZOOL. 120 s. *Genetics* (2)—Two lectures. Prerequisite, one course in general zoology or general botany.

A general introductory course designed to acquaint the student with the fundamental principles of heredity and variation. While primarily of interest to students of biology, it will be of value to those interested in the humanities. (Burhoe.)

ZOOL. 140. *Marine Zoology*—Credit to be arranged.

This work is given at the Chesapeake Laboratory, which is conducted co-operatively by the Maryland Conservation Department and the Department of Zoology and Aquiculture, on Solomons Island, where the research is directed primarily toward those problems concerned with commercial forms, especially the blue crab and the oyster. The work starts during the third week of June and continues until mid-September, thus affording ample time to investigate complete cycles in life histories, ecological relationships, and plankton contents. Course limited to few students, whose selection will be made from records and recommendations submitted with applications, which should be filed on or before June 1st.

Laboratory facilities, boats of various types fully equipped (pumps, nets, dredges, and other apparatus) and shallow water collecting devices are available for the work without extra cost to the student. (Truitt.)

GENETICS 101 f. (See page 194.)

For Graduates

ZOOL. 200 y. *Zoology Problems*. (Pierson, Truitt, McConnell.)

SECTION IV DEGREES, HONORS, STUDENT REGISTER DEGREES CONFERRED, 1928

HONORARY DEGREES

DOUGLAS MACARTHUR, Doctor of Laws
JOHN R. MOHLER, Doctor of Science

HONORARY CERTIFICATES OF MERIT

JOSIAH WATERS JONES

M. FRANK HOLTER

HUMPHREY DAVID WOLF

THE GRADUATE SCHOOL Doctor of Philosophy

FREDERICK RANDOLPH DARKIS
B.A. University of Maryland, 1922.
M.S. University of Maryland, 1923.

Dissertation:
"The Effect of Heat and Ultra-violet Light on Unsaturated Compounds and the Theory of Electroisomerism."

FLOYD HENRY HARPER
B.S. University of Maryland, 1924.
M.S. North Carolina State College, 1925.

Dissertation:
"Forecasting the Acreage, Yield, and Price of Cotton."

GEOFFREY V. C. HOUGHLAND
B.S. University of Delaware, 1924.
M.S. Iowa State College, 1926.

Dissertation:
"The Relative Efficiency of Different Forms of Nitrogen and Potassium in Potato Production on the Eastern Shore of Maryland."

JOHN CHRISTIAN KRANTZ, JR.
B.Pharm. University of Maryland, 1923.
M.S. University of Maryland, 1924.

Dissertation:
"Emulsions and the Effect of Hydrogen Ion Concentration Upon Their Stability."

MARTIN LEATHERMAN
B.A. Ohio State University, 1924.
M.S. University of Maryland, 1925.

Dissertation:
"The Precise Determination of Cobalt As the Sulfide."

RUSSELL GROVE ROTHGEB
B.S. University of Maryland, 1924.
M.S. Iowa State College, 1925.

Dissertation:
"A Statistical Study of Several Morphological Characters Associated with Reproduction and Yield in Maize."

WILLIAM EDWIN WHITEHOUSE
B.S. Oregon Agricultural College,
1915.
M.S. Iowa State College, 1920.

Dissertation:
"A Nutritional Study of the
Strawberry."

Master of Arts

CAMERON ARTHUR CARTER	GORDON SEXTON PATTON
GEORGE W. FOGG	ALMA DOROTHY SHIPLEY
GLADYS MAY FORSYTHE	ROBERT CARLETON SMITH
ARTHUR CHARLES PARSONS	WILBUR ARTHUR STREETT

Master of Science

MARIAN HELEN MCGILL CONNER	LEO J. POELMA
NORWOOD AUGUSTUS EATON	BURWELL B. POWELL
HORACE BLACKMAR FARLEY	SOL PRUSSACK
ELLIOT FISHBEIN	HUGH ROSS
ROMEO RALPH LEGAULT	LEANDER S. STUART
JAMES EDWARD MCMURTREY, JR.	NORWOOD CHARLES THORNTON
JAMES ZENUS MILLER	MARK F. WELSH
WILLIAM HEMPSTONE MOORE	WRIGHT MONTGOMERY WELTON
ALTON EVERETT NOCK	EDGAR FAHRNEY WOLF
PAUL X. PELTIER	ROY C. YODER

COLLEGE OF AGRICULTURE

Bachelor of Science

DONALD HASLUP ADAMS	SAMUEL ROSCOE MOLESWORTH
SAMUEL JOSEPH ADY, JR.	*ANDREW BASIL PHUCAS
JOSEPH HAROLD BAFFORD	BURWELL B. POWELL
RICHARD D'ARCY BONNET	GENEVA ELIZABETH REICH
HENRY BROWN	MARION A. ROSS
WILLIAM WALTER CHAPMAN, JR.	CHARLES WIGHTMAN SEABOLD
FREDERICK NORVAL DODGE	REESE L. SEWELL
DANIEL COX FAHEY, JR.	FLORENCE TUCKER SIMONDS
JAMES GUSTAVUS GRAY, JR.	HARVEY HASLER STANTON
BURBAGE HARRISON	SAMUEL HENRY WINTERBERG
JOSEPH GEORGE HARRISON	JOHN FRANKLIN WITTER
ROBERT PARKS KAPP	JOHN RUPERT WOODWARD
BERNARD HOUCK MILLER	

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

CLARENCE T. BLANZ	FRANCIS LYON CARPENTER
WILLIAM BURLEIGH, JR.	OMER RAYMOND CARRINGTON

* Degrees conferred after June, 1928.

WILLIAM ROY CHEEK
CONSTANCE CHURCH
*MILTON S. COLLINS
RODNEY POWERS CURRIER
*JAMES JOSEPH DERAN, JR.
EVELYN VIRGINIA ECKERT
ELIZABETH EDMISTON
THELMA ALBERTA ELLIOTT
ALMA FRANCES ESSEX
ALBERT FOWLER MARTINE GRANGER
*IRVING RUSSELL GREENLAW
ALDEN WARNE HOAGE
RAYMOND BARTLETT HODGESON
*HOWARD S. JACOBSON
JOSEPH MORRIS JONES
GRACE ELIZABETH LALEGER
REUBEN RICHARD LOUFT
LOUISE MARLOW
HENRY CRAVEN MATTHEWS
HOWARD GARRET MCENTEE

FREDERIC ANDREW MIDDLETON
ELIZABETH MILLER
JOHN ALFRED MYERS
EDSON BALDWIN OLDS, JR.
RALPH WILSON POWERS
JOHN EDWARD RYERSON
*WILLIAM MERVEN SEABOLD
DONALD ELLIOTT SHOOK
MARTHA THOMPSON SIMS
ROGER VAN LEER SNOUFFER
HENRY NELSON SPOTTSWOOD
NOVA ORR THOMPSON
HOWARD GILBERT TIPPETT
EDWARD LAWRENCE TROTH
ADELYN BEATRICE VENEZKY
WILLIAM KENNEDY WALLER
EMILY THOMAS WOOD
MILLY LOUDON WOOLMAN
JAMES EARLE ZULICK

Bachelor of Science

FRANK YODER BRACKBILL
ROBERT HENRY BRUBAKER
FREDERICK HUGHES EVANS
WILLIAM LAWRENCE FAITH
JACK FEIN
JOSEPH DONALD GALLIGAN
SAMUEL GELLER
JOHN OLIVER HAY
ALBIN FRANK KNIGHT

DONALD THOMAS LONGENBERGER
CHARLES MONROE MERRILL
EDITH KEPPLINGER MYERS
WILLIAM HANS PRESS
SOLOMON REZNEK
JOHN EDWARD SAVAGE
HERBERT KING WARD
GLENN STATLER WEILAND
FLOYD HENRY WIRSING

SCHOOL OF BUSINESS ADMINISTRATION

Bachelor of Science in Business

RUTH M. PHILLIPS

STUART BERRYMAN RUSSELL

Certificates of Proficiency

MORRIS J. CAPLAN
NATHAN EISENBERG
CLARENCE JACOBS

I. THEODORE ROSENBLUM
MAX TRIVAS
HENRY YANKELLOW

* Degrees conferred since June, 1928.

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

PHILIP ARKUS	LEWIS M. HAGGERTY
IRVING JEROME ARONSON	ALFRED MORRIS HOFFERMAN
WILLIAM C. BASEHOAR	CLEMENT ERIC HUGGINS
ARTHUR BARTON BISHOP	ABRAHAM JACOBS
DOMINGO ALEJANDRO BLASINI	IRVIN BERT KAPLAN
SIDNEY H. BLUMBERG	JULIUS J. KELSEY
HARRY JOSEPH BOBINSKI	BERNARD KNIBERG
ABRAHAM ELLIS BOCHENEK	BENJ. MITCHELL KNIGHT, JR.
*NORMAN R. BOWERS	FERDINAND CARL KOHLER
BYRON RUSSELL BRANCH	WILLIAM BRYDON LAUTEN
HOWARD GEORGE BRISTOL	BENJAMIN LAVINE
HAROLD C. BRITTEN	PHILIP C. LOWENSTEIN
BENJAMIN ALVIN BROWN	WILLIAM ALEXANDER MCCLUER
LEE BUCHER	VINCENT PAUL MCGRATH
THEODORE ALONZO CHAPPELEAR	JOHN SIMMONS MACHADO, JR.
MELVIN HAZEN COLVIN	PIUS G. MACHOKAS
THOMAS C. CONWAY	FREDERICK EFFINGER MARKLEY
ELMER F. COREY	EDWARD WILLIAM MARAZAS
EMIL L. COSTANZA	WILBUR BASEHOAR MEHRING
*GILBERT T. CRAIG	C. PAUL MILLER
F. NELSON CRIDER	STANLEY GRAY MOORE
EDWARD J. CZAJKA	MAYO BERNARD MOTT
G. HOWARD DANA	RICHARD THOMAS MOXLEY, JR.
PAUL ADAM DEEMS	JERROLD WILBUR NEEL, JR.
ROMEO J. DEFLORE	JEROME J. ORANGE
JOHN K. DEVAN	A. HARRY OSTROW
MARTIN LOUIS DONATELLI	JOSEPH ANTHONY PENNINO
MEYER EGGNATZ	JEFFREY BASIL RIZZOLO
JUSTUS H. EIGENRAUCH	*JACK RALPH ROSIN
*WILLIAM JOSEPH FALK	EMILIO RUIZ VELEZ
*J. WILLIAM FAUCETTE, JR.	*EDWIN M. RYAN
JOSEPH FENICHEL	BENJAMIN SACHNER
OSCAR FIDEL	C. HERBERT SCHAEDEL
*SAMUEL MARSHAL FRANK	FRANK C. SEEMANN
RALPH COOKMAN GALE	*WALTER L. SELENS
LESTER CARRINGTON GALLEN	FRED SHAPIRO
IRVIN BERNARD GOLBORO	DAVID B. SILVERMAN
WILLIAM MILFORD GOLDBERG	IRVING SOFFERMAN
DANIEL J. GORDON	HORACE HUYLER STAGG
CHARLES KEITH GOULD	RICHARD J. STOCK
*FRANCISCA GUERRA-ALVAREZ	HARRY TETER
*LAWRENCE M. HAGERTHY	ALFRED EMERSON TOYE

* Degrees conferred since September 26, 1928.

GEORGE ALBERT UIHLEIN
RAY A. VAWTER
ARTHUR WILLIAM VON DEILEN

CHARLES C. WHITE
S. HOLT WRIGHT
CLEMENT A. ZERDESKY

COLLEGE OF EDUCATION

Bachelor of Arts

CORNELIA LEE ARCHER	*LENORA ALBERTA MAYER
CHRISTINE MARY BRUMFIELD	PHILEMON ISABEL MCCOY
PAUL LUCKEL DOERR	NONA AUGUSTA MILINER
FRANCES FOOKS FREENY	FRANCES FOSTER MORRIS
FRANCES ISABELLE GRUVER	ELLWOOD RADMOOR NICHOLAS
LOUISE HARBAUGH	EDITH CATHERINE REAM
*ELEANOR BLANCHE HENDERSON	GERVIS GARDNER SHUGART
MARGARET LOUISE HOWARD	*DANIEL RUCH STALEY
STANLEIGH EDWARD JENKINS	PERRY OLIVER WILKINSON
*JOSEPHINE MARY KELLY	MILDRED HELEN WIMER
GRACE VIRGINIA KEMP	MARGARET MARY WOLF
MARY EVELYN KUHNLE	MAY-LOUISE WOOD
BUFORD W. MAUCK	

Bachelor of Science

ELISABETH M. BEALL	JANE KIRK
HARRY WESLEY BEGGS	MARGARET EVELYN KNAPP
VERBA ROSELLE BISHOFF	JOHN DANIEL LEATHERMAN
ALICE LUCILE BURDICK	VIRGINIA SPENCE PRICE
*THOMAS PAUL HACKETT	CHARLES FRANCIS PUGH
PHYLLIS MARIE HOUSER	THOMAS H. STEPHENS

Teachers' Special Diplomas

SAMUEL JOSEPH ADY, JR.	*THOMAS PAUL HACKETT
CORNELIA LEE ARCHER	LOUISE HARBAUGH
ELISABETH M. BEALL	*ELEANOR BLANCHE HENDERSON
HARRY WESLEY BEGGS	PHYLLIS MARIE HOUSER
VERBA ROSELLE BISHOFF	MARGARET LOUISE HOWARD
LUTHER FRANCIS BROMLEY	STANLEIGH EDWARD JENKINS
CHRISTINE MARY BRUMFIELD	JOSEPH MORRIS JONES
ALICE LUCILE BURDICK	*JOSEPHINE MARY KELLY
CONSTANCE CHURCH	GRACE VIRGINIA KEMP
PAUL LUCKEL DOERR	JANE KIRK
EVELYN VIRGINIA ECKERT	MARGARET EVELYN KNAPP
ELIZABETH EDMISTON	MARY EVELYN KUHNLE
ALMA FRANCES ESSEX	GRACE ELIZABETH LALEGER
FREDERICK HUGHES EVANS	JOHN DANIEL LEATHERMAN
FRANCES FOOKS FREENY	LOUISE MARLOW
FRANCES ISABELLE GRUVER	BUFORD W. MAUCK

* Degrees conferred after June, 1928.

*LENORA ALBERTA MAYER
PHILEMON ISABEL MCCOY
NONA AUGUSTA MILNER
BERNARD HOUCK MILLER
ELIZABETH MILLER
FRANCES FOSTER MORRIS
EDITH KEPPLINGER MYERS
ELWOOD RADMOOR NICHOLAS
VIRGINIA SPENCE PRICE
CHARLES FRANCIS PUGH
EDITH CATHERINE REAM
CHARLES WIGHTMAN SEABOLD

GERVIS GARDNER SHUGART
HARVEY HASLER STANTON
THOMAS H. STEPHENS
NOVA ORR THOMPSON
PERRY OLIVER WILKINSON
MILDRED HELEN WIMER
SAMUEL HENRY WINTERBERG
FLOYD HENRY WIRSING
JOHN FRANKLIN WITTER
MARGARET MARY WOLF
EMILY THOMAS WOOD
MAY-LOUISE WOOD

Certificates in Industrial Education

DOUGLAS ALLEN
JOSEPH THOMAS CROMACK
RAYMOND NELSON DONELSON
HARRY KINGSBURY GARDNER
MELVIN DANIEL HEDRICK

WILLIAM HENRY JOLLY
SAMUEL LOUIS KROTEE
CLARA ELIZABETH WHOLEY
ELGERT LEROY WIEGMAN

COLLEGE OF ENGINEERING

Civil Engineer

FRANK AMOS BENNETT

CHARLES EUGENE DARNALL

Electrical Engineer

JOHN ALBERT BUTTS

Mechanical Engineer

LEO WILLIAM SNYDER

Bachelor of Science

LESTER PLANT BAIRD
LESLIE RUSSELL BRADY
WILLIAM O'NEAL BRUEHL
JAMES YOUNG CLEVELAND
JOHN KAY DALY
JAMES SLATER DAVIDSON, JR.
ALFRED FRANCIS DIENER
WILLIAM ANDREW DYNES
ROBERT BRUCE EMERSON, JR.
EDWARD ALBERT FOEHL
ARTHUR WARD GREENWOOD
HORACE RICHARD HAMPTON
WILLIAM HUGH IGLEHART
JOHN HOPKINS LOUX
DELBERT B. LOWE

HERNDON LAWRENCE MALONEY
MILTON MARSEGLIA
JOHN ALLAN MATHEWS
ELICK EDWARD NORRIS
EDWIN CARROLL PAIGE
ROBERT LEONARD PALMER
ORIS LESTER RADER
GEORGE RAY RICHARD
ALFRED H. SCHAEFER
CHARLES LATIMER SHELTON
JOSEPH W. STROHMAN
LEWIS WALTER THOMAS, JR.
RICHARD GORDON WARNER
HARRY WARREN WELLS
MALLERY ONTHANK WOOSTER

* Degree conferred after June, 1928.

COLLEGE OF HOME ECONOMICS

Bachelor of Science

MARY BOURKE
OLIVE SPEAKE EDMONDS
JOSEPHINE GODBOLD
FRANCES LOUISE GUNBY

MARY JANE MCCURDY
RUTH TEFFT WILLIAMS
MARY STEWART YORK

SCHOOL OF LAW

Bachelor of Laws

HAROLD E. BLICKENSTAFF
CHARLES CARROLL, JR.
MOSES COHEN
EDWIN CHARLES COOGAN
HEWLETT B. COX
ALBERT ALVIN DOUB, JR.
JAMES DOYLE, 3RD
ODEN BOWIE DUCKETT, JR.
JOHN W. EVERETT
FRANK W. FORESTELL
ABE FRIBUSH
MAX FRIEDMAN
C. ELLIS GOLDSTEIN
AARON IRVING GOLDSTEIN
STEWART ECCLESTON GORDON
ROSALIND GREENBERG
MILTON M. HACKERMAN
JOSEPH R. HIRSCHMANN
ISIDORE DAVID HURWITZ
DAVID KLEIN
JAMES WALTER LEYKO
ABRAHAM MAHR

EDWIN GILL MARTIN
DANIEL ALAN McMAHON
S. ALFRED MUND
ELMER LEWIS MYLANDER
ALVIN NEUBERGER
EVERETT NUTTLE
EDWIN S. PANETTI
WILBUR JACKSON PRESTON
*JOEL HENRY REED, 2ND
DONALD PHILIP ROMAN
PHILIP HELLER SACHS
JOSEPH SACKS
PERCY SCHERR
EDWARD HOLLOWAY SCHMIDT
LOUIS SCHWARTZMAN
SIDNEY SELIGMAN
LESTER THOMAS DANIEL SHAFER
RAYMOND MILTON SHEA
HARRY RICHARD SMALKIN
M. LEO STORCH
CHARLES EDWIN VOGEL
ALVA PALMER WEAVER, JR.

SCHOOL OF MEDICINE

Doctor of Medicine

ADOLPH BAER
HUGH ALVIN BAILEY
MARCEL RECHTMAN BEDRI
WILLIAM ADOLPH BERGER
IRVING EZRA BLECHER
NICHOLAS WILLIAM BONELLI
SIMON BRAGER
HERMAN CHOR
EARLE PRINCETON CLEMSON
AARON ISAAC GROLLMAN

GEORG KROHN GULCK
FREDERICK MOOMAN DUCKWALL
GEORGE ANDREW DUNCAN
BERNARD FRIEDMAN
HERBERT WILLIAM GARRED
JACQUES SAUL GILBERT
JESSIE ETHELWYN GEORGE
VICTOR GOLDBERG
JEROME EDWARD GOODMAN
CREED COLLINS GREER

* Degree conferred after June, 1928.

LEWIS PERKINS GUNDRY
 SAMUEL JAY HANKIN
 PAUL HAYES
 LEWIS JACOB HEROLD
 WALTER BRENNAMAN JOHNSON
 HENRY ALVAN JONES
 *ISRAEL KAUFMAN
 PHILIP LOUIS KAYE
 THEODORE KOHN
 NATHAN HERSH KOTCH
 HYMAN LAMPERT
 JACOB IRWIN LAMSTEIN
 JOSEPH GEORGE LAUKAITIS
 MORRIS LERNER
 MAURICE LEVINSKY
 LOUIS JACK LEVINSON
 EARL FREDERICK LIMBACH
 EDWARD ANDREW LITSINGER
 LUTHER EMANUEL LITTLE
 IRVING ISAAC LITTMAN
 ISADORE BERNARD LYON
 JOHN MACE, JR.
 VINCENT MICHAEL MADDI
 ALAN JOHN MAGED
 ROBERT SADLER MCCENEY
 WILLIAM NEAL McFAUL, JR.
 WILLIAM BUSTER MCGEE
 ROBERT AMOS MEE
 AARON MEISTER
 DAVID MERKSAMER
 FRANK ANTHONY MERLINO

VINCENT MICHAEL MESSINA
 RALPH MOSTWILL
 PASQUALE ANTHONY PIACENTINE
 PETER PILEGGI
 HENRY MORRIS RASCOFF
 BENJAMIN SUNDERLAND RICH
 CARL PAUL ROETLING
 MARKS JULIUS ROSEN
 HYMAN SOLOMON RUBENSTEIN
 JOSEPH HOWARD RUTTER
 MORRIS HAROLD SAFFRON
 SAMUEL ROBERT SARDO
 CECIL CURRY SHAW
 ABRAHAM ALFRED SILVER
 JACK JEROME SINGER
 AUBREY CANNON SMOOT
 MERRILL CLAYVELLE SMOOT
 THEODORE EDWIN STACY, JR.
 LEVI WADE TEMPLE
 DAVID TENNER
 WILLIAM HENRY VARNEY
 ANTHONY PAUL VERNAGLIA
 *S. ZACHARY VOGEL
 CARROLL GARDNER WARNER
 FRED SIEGFRIED WEINTRAUB
 NATHAN WEISENFELD
 SAMUEL ROBERT WELLS
 FREDERICK SAMUEL WOLF
 MILTON WURZEL
 OSCAR DEMELLE YARBROUGH
 FREDERICK THOMAS ZIMMERMAN

SCHOOL OF NURSING Graduate in Nursing

MARGARET E. CURRENS	MARIE CLARKSON PEARCE
HILDA LOUISE DUGGER	ELIZABETH S. PENNEWELL
EDITH ELIZABETH HALL	ELIZABETH AUGUSTA PRIESTER
IRENE ELIZABETH HAMRICK	MARGARET MARY RIFFLE
MARTHA ALICE HASTINGS	KATHERINE LANDWEHR ROTH
ANNE HOFFMAN	EMILY ROSE SLACUM
GOLDIE IWILLA HOUGH	VADA BRUNETTA SMITH
THELMA LEE HUDDLESTON	GRACE BELL WAGNER
FRANCES MILDRED LEISHEAR	EMMA ARLINE WINSHIP
MARTHA AGNES MAGRUDER	R. ELIZABETH WORK
MILDRED MAY MARCUS	

* Degree conferred after June, 1928.

SCHOOL OF PHARMACY

Graduate in Pharmacy

WILBUR FORD BARRY	ABRAHAM D. LESSER
JOSEPH BELFORD	VINCENT CHARLES LEVINE
JOSEPH CECIL BERNSTEIN	*SAMUEL LONDON
SAMUEL STANTON BLUMSON	L. LAVAN MANCHEY
BENJAMIN BRETZFELDER	VINCENT LOUIS MATASSA
*FRANK MILTON BUDACZ	GEORGE CHARLES MICHEL
VINCENT JAMES CANNALIATO	RUTH MILLARD
FRANK PICHA CHRIST	ELLIS BENJAMIN MYERS
NATHANIEL TOLBERT COHAN	DAVID HERMAN ROSENFELD
IRVING I. COHEN	*WILLIAM MERWIN RUBEN
ISIDORE COHEN	*RAYMOND SACHS
ANTHONY DANIEL CRECCA	MARCUS SATOU
WALTER DANIEL DEMBECK	THOMAS SEWELL SAUNDERS, JR.
HYMAN DICKMAN	NATHAN SCHIFF
HERBERT EICHERT	MILTON SCHLACHMAN
MILTON J. FITZSIMMONS	DAVID I. SCHWARTZ
ALBERT JULIUS GLASS	JOSEPH ANTON SENER
SAMUEL LEOPOLD GREENBAUM	SAMUEL J. SHESELSKY
WILLIAM GROSS	ANDREW W. SILBERT
IRVIN HANTAM	ALBERT M. SILVERMAN
AARON HOFFMAN	JEROME SNYDER
HARRY HOFFMAN	AARON C. SOLLOD
JOHN JOSEPH KAIRIS	L. REX SPRINGER
ISADOR KARPA	SOLOMON STICHMAN
MILTON B. KRESS	*JOHN THOMAS TARANTINO
MAXWELL A. KRUCOFF	JAMES NATHAN TRATTNER
HARRY LEBOWITZ	

Pharmaceutical Chemist

JOSEPH MILLETT	*EMANUEL V. SHULMAN
----------------	---------------------

Bachelor of Science in Pharmacy

MARVIN JACKSON ANDREWS	*FRANK J. SLAMA
JOHN CONRAD BAUER	ARTHUR STORCH

MEDALS, PRIZES AND HONORS, 1928

Elected Members of Phi Kappa Phi, Honorary Fraternity

LESTER PLANT BAIRD	WILLIAM ANDREW DYNES
FRANK YODER BRACKBILL	FREDERICK HUGHES EVANS
CONSTANCE CHURCH	GLADYS MAY FORSYTHE
PAUL LUCKEL DOERR	FRANCES FOOKS FREENY

* Degrees conferred since September 10, 1928.

FRANCES ISABELLE GRUVER	VIRGINIA SPENCE PRICE
MARK HUGHLIN HALLER	HUGH ROSS
MARY EVELYN KUHNLE	MENDES HERZL SACHS
GRACE ELIZABETH LALEGER	WRIGHT MONTGOMERY WELTON
MARY JANE MCCURDY	JOHN FRANKLIN WITTER
PAUL VINCENT MOOK	ROY C. YODER
ELICK EDWARD NORRIS	MARY STEWART YORK
BURWELL B. POWELL	

Citizenship Medal, offered by Mr. H. C. Byrd, Class of 1908
JOHN EDWARD SAVAGE

Citizenship Prize, offered by Mrs. Albert F. Woods
FRANCES FOOKS FREENY

Athletic Medal, offered by the Class of 1908
LEWIS WALTER THOMAS

Athletic Trophy for Women, offered by Dr. Albert F. Woods
MARY JANE MCCURDY

Goddard Medal, offered by Mrs. Annie K. Goddard James
DANIEL COX FAHEY, JR.

Sigma Phi Sigma Freshman Medal
FELISA JENKINS

Alpha Zeta Agricultural Freshman Medal
HENRY FOLTZ LONG

Dinah Berman Memorial Medal, offered by Benjamin Berman
HOWARD HAMILTON HINE

Public Speaking Prize, offered by W. D. Porter
JOHN FRANKLIN WITTER

Women's Senior Honor Society Cup
MARY EVELYN KUHNLE

The Diamondback Medals

MARY JANE MCCURDY	HERBERT KING WARD
H. ROSS BLACK, JR.	RAYMOND C. CARRINGTON
JOHN ALLAN MATHEWS	

The Reveille Medals

EDITH FRANCES BURNSIDE	HERBERT NELSON BUDLONG
PHILIP ASBURY INSLEY	GEORGE AMAN

The Oratorical Association of Maryland Colleges offers each year gold medals for the first and second places in an oratorical contest

Medal for second place awarded to
MAY-LOUISE WOOD

Alumni Medal for Excellence in Debate
EDITH FRANCES BURNSIDE

"President's Cup," for Excellence in Debate, offered by
Dr. H. J. Patterson
NEW MERCER LITERARY SOCIETY

"Governor's Drill Cup," offered by his Excellency, Honorable
Albert C. Ritchie, Governor of Maryland
COMPANY E—COMMANDED BY CAPTAIN JOHN E. RYERSON

Military Faculty Award
CADET LIEUT. COL. PAUL LUCKEL DOERR

Military Medal, offered by the Class of 1899
CADET WARREN CLEMENTS MITCHELL

Military Faculty Award
CADET MAJOR HORACE HAMPTON

Washington Chapter Alumni Military Cup
FIRST PLATOON, COMPANY E—COMMANDED BY LIEUTENANT
ALDEN WARNE HOAGE

Inter-Collegiate Third Corps Area Rifle Cup
NORVAL HARRISON SPICKNALL

University of Maryland Prize (Sword), to the best company commander
CADET CAPTAIN JOHN E. RYERSON

WAR DEPARTMENT AWARDS OF COMMISSIONS AS SECOND LIEUTENANTS IN THE INFANTRY RESERVE CORPS

LESTER PLANT BAIRD	ALBIN FRANK KNIGHT
CLARENCE THEODORE BLANZ	JOHN ALLAN MATHEWS
ROBERT HENRY BRUBAKER	BUFORD WILLIAM MAUCK
FRANCIS LYON CARPENTER	FREDERIC ANDREW MIDDLETON
WILLIAM WALTER CHAPMAN, JR.	JOHN ALFRED MYERS
WILLIAM ROY CHEEK	CHARLES FRANCIS PUGH
JAMES PHILLIPS DALE	JOHN EDWARD RYERSON
JOHN KAY DALY	REESE LAWRENCE SEWELL
JAMES SLATER DAVIDSON, JR.	CARL FREDERICK SLEMMER
JAMES ARTHUR DEMARCO	HENRY NELSON SPOTTSMOOD
PAUL LUCKEL DOERR	LEWIS WALTER THOMAS, JR.
DANIEL COX FAHEY, JR.	HAROLD ORDELL THOMEN
ARTHUR WARD GREENWOOD	EDWARD LAWRENCE TROTH
HORACE RICHARD HAMPTON	JACK VIERKORN

AWARDS OF MILITARY COMMISSIONS

PAUL LUCKEL DOERR	Lieutenant Colonel
DANIEL COX FAHEY, JR.	Major
HORACE RICHARD HAMPTON	Major
LESTER PLANT BAIRD	Captain
WILLIAM WALTER CHAPMAN, JR.	Captain
JOHN KAY DALY	Captain
JAMES SLATER DAVIDSON, JR.	Captain
ARTHUR WARD GREENWOOD	Captain
JOHN EDWARD RYERSON	Captain
CARL FREDERICH SLEMMER	Captain
HAROLD ORDELL THOMEN	Captain
JAMES PHILLIPS DALE	First Lieutenant
ALDEN WARNE HOAGE	First Lieutenant
JOHN ALLAN MATHEWS	First Lieutenant
FREDERIC ANDREW MIDDLETON	First Lieutenant
JOHN ALFRED MYERS	First Lieutenant
CHARLES FRANCIS PUGH	First Lieutenant
REESE L. SEWELL	First Lieutenant
DONALD ELLIOTT SHOOK	First Lieutenant
LEWIS WALTER THOMAS, JR.	First Lieutenant
EDWARD LAWRENCE TROTH	First Lieutenant
CLARENCE T. BLANZ	Second Lieutenant
ROBERT HENRY BRUBAKER	Second Lieutenant
FRANCIS LYON CARPENTER	Second Lieutenant
WILLIAM ROY CHEEK	Second Lieutenant
JAMES ARTHUR DEMARCO	Second Lieutenant
ALBIN FRANK KNIGHT	Second Lieutenant
BUFORD W. MAUCK	Second Lieutenant
MORRIS OSTROLENK	Second Lieutenant
HENRY NELSON SPOTTSWOOD	Second Lieutenant
JACK VIERKORN	Second Lieutenant
RICHARD GORDON WARNER	Second Lieutenant

HONORABLE MENTION

College of Agriculture

First Honors—BURWELL B. POWELL, JOHN FRANKLIN WITTER,
FLORENCE TUCKER SIMONDS

Second Honors—RICHARD D'ARCY BONNET, DANIEL COX FAHEY, JR.
College of Arts and Sciences

First Honors—FREDERICK HUGHES EVANS, FRANK YODER BRACKBILL,
HERBERT KING WARD, WILLIAM LAWRENCE FAITH, GRACE
ELIZABETH LALEGER, EVELYN VIRGINIA ECKERT, ELIZA-
BETH MILLER

Second Honors—EDSON BALDWIN OLDS, JR., CONSTANCE CHURCH, EMILY
THOMAS WOOD, GLENN STATLER WEILAND, MILLY
LOUDON WOOLMAN, JOSEPH DONALD GALLIGAN

College of Education

First Honors—VIRGINIA SPENCE PRICE, FRANCES ISABELLE GRUVER,
MARY EVELYN KUHNLE, JANE KIRK

Second Honors—GRACE VIRGINIA KEMP, VERBA ROSELLE BISHOFF,
ELLWOOD RADMOOR NICHOLAS

College of Engineering

First Honors—LESTER PLANT BAIRD, ELICK EDWARD NORRIS,
WILLIAM ANDREW DYNES

Second Honors—ARTHUR WARD GREENWOOD, DELBERT B. LOWE,
ROBERT LEONARD PALMER

College of Home Economics

First Honors—MARY JANE MCCURDY

School of Dentistry

University Gold Medal for Scholarship
ARTHUR BARTON BISHOP

Honorable Mention

PAUL ADAM DEEMS	C. PAUL MILLER
LESTER CARRINGTON GALLEN	WILLIAM BRYDON LAUTEN
BYRON RUSSELL BRANCH	

School of Law

Prize of \$100.00 for the Highest Average Grade for the Entire Course
ISIDORE DAVID HURWITZ

Prize of \$100.00 for the Most Meritorious Thesis
CHARLES EDWIN VOGEL

Alumni Prize of \$50.00 for Winning Honor Case in the Practice Court
STEWART ECCLESTON GORDON

School of Medicine

University Prize—Gold Medal
DAVID TENNER

CERTIFICATES OF HONOR

ADOLPH BAER	JACOB IRVING LAMSTEIN
RALPH MOSTWILL	AARON ISAAC GROLLMAN
	BERNARD FRIEDMAN

The Dr. Jose L. Hirsch Memorial Prize of \$50.00 for the Best Work
in Pathology During the Second and Third Years

DAVID TENNER

The Dr. Leo Karlinsky Memorial Scholarship for the Highest
Standing in the Freshman Class

SAMUEL FELDMAN

School of Nursing

University of Maryland Nurses' Alumnae Association Scholarship to
Columbia University

FRANCES MILDRED LEISHEAR

The Elizabeth Collins Lee Prize of \$50.00 for Second Highest Average
in Scholarship

MARIE CLARKSON PEARCE

Prize of \$25.00 for the Highest Average in Executive Ability

EDITH ELIZABETH HALL

Edwin and Leander M. Zimmerman Prize for Practical Nursing

FRANCIS MILDRED LEISHEAR

University of Maryland Nurses' Alumnae Association Pin and
Membership in the Association

EDITH ELIZABETH HALL

Prizes in Intermediate Class (1929)

Mrs. A. M. Shipley Prize of \$5.00 for Highest Average in Theory

MARTHA REBECCA PIFER

Mrs. Charles R. Posey Prize of \$5.00 for Highest Average in
Practical Nursing

MARTHA REBECCA PIFER

Prizes in Junior Class (1930)

Dr. Randolph Winslow Prize of \$5.00 for Highest Average in Theory

GLADYS ADKINS

Mrs. J. W. Brown Prize of \$5.00 for Highest Average in Practice

OSCIE DAVIS

Mrs. F. I. Mosher Prize of \$10.00 for Neatness and Order

RUTH WARD

School of Pharmacy
Gold Medal for General Excellence
JAMES NATHAN TRATTNER

The William Simon Memorial Prize for Proficiency in Practical Chemistry

L. LAVAN MANCHEY

The Charles Caspari, Jr., Memorial Prize (\$50.00)

HERBERT EICHERT

Research Scholarship of the Alumni Association (\$100.00)

JOSEPH ANTON SENER

Honorable Mention (Second Year Class)

WILLIAM P. ROBERTS

CASIMER THADDEUS ICHNIOWSKI

WALLACE HENRY MALINOSKI

REGIMENTAL ORGANIZATION R. O. T. C. UNIT, 1928-29

FRED B. LINTON, Lieutenant Colonel, Commanding
W. IRVINE RUSSELL, First Lieutenant, Regimental Adjutant

1st Battalion

BENJAMIN DYER, Major, Commanding
CHARLES F. WHITLOCK, Second Lieutenant, Battalion Adjutant

COMPANY "A"

Robert D. Clark,
Commanding

Walter P. Plumley

Frank Leschinsky

COMPANY "B"

Captains

Richard J. Epple,
Commanding

First Lieutenants

Ralph C. VanAllen

Second Lieutenants

Harry C. Ort

COMPANY "C"

Philip Wertheimer,
Commanding

J. Delmar Bock

Thomas A. Hughes

2nd Battalion

CHARLES V. KOONS, Major, Commanding
WARREN B. HUGHES, Second Lieutenant, Battalion Adjutant

COMPANY "D"

Harold L. Kreider,
Commanding

Edward A. Shepherd

John B. Parsons

COMPANY "E"

Captains

J. Arthur Wondrack,
Commanding

First Lieutenants

John M. Leach

Second Lieutenants

Milton M. Price

COMPANY "F"

Alfred F. Weirich,
Commanding

Edward A. Pisapia

Arthur A. Froehlich

CADET BAND

Band under direction of Master Sergeant Otto Siebeneichen,
The Army Band, Washington Barracks, Washington, D. C.

Captain

Henry E. Wheeler

Second Lieutenant

William L. Hopkins

NON-COMMISSIONED OFFICERS

1st Battalion

COMPANY "A"

William L. Lucas

Robert W. Lockridge
J. Donald Nevius
Dorrance Talbot

COMPANY "B"

First Sergeants

William J. Kinnamon

Sergeants

Graef W. Buehm
John T. O'Neill
Eugene J. Roberts

COMPANY "C"

John N. Umbarger

Bryant L. Hanback
William D. Putnam
David A. Rosenfeld

2nd Battalion

COMPANY "D"

Melvin E. Koons

Foster E. Lippard
Phil L. Porter

COMPANY "E"

First Sergeants

W. Edward Siddall

Sergeants

William W. Heintz
Irving O. Linger
John H. Ward

COMPANY "F"

Philip A. Insley

J. Donald DeMarr
Luther Harper

REGISTER OF STUDENTS, 1928-29

COLLEGE OF AGRICULTURE

SENIOR CLASS

Cockerill, William H., Purcellville, Va.
Cooper, William C., Salisbury
Fisher, Paul L., Washington, D. C.
Garden, William M., Washington, D. C.
Hamilton, Arthur B., Darlington
Hershberger, Merl F., Grantsville
Hughes, George B., Jr., Ammendale
Johnston, Robert S., Schuylkill Haven, Pa.
Long, Joseph C., Ridgely
Nestler, Ralph B., Washington, D. C.

Ostrolenk, Morris, Chevy Chase
Ramsburg, Elmer K., Ellicott City
Reneger, Cecil A., Baltimore
Romary, Raymond J., Ridgewood, N. J.
Smith, Ross V., Frederick
Stabler, Stanley P., Spencerville
Strasburger, Lawrence W., Baltimore
Taylor, Theret T., Cumberland
Teeter, William R., Elkton
Weiss, Theodore B., Newark, N. J.

JUNIOR CLASS

Beauchamp, Earl, Westover
Boyles, William A., Westernport
Cox, B. Franklin, Takoma Park
Dean, Charles T., Ridgely
Dunnigan, Arthur P., Pylesville
Gahan, James B., Berwyn
Grey, Charles G., Washington, D. C.
Groshon, Lloyd E., Graceham
Gruver, Evangeline T., Hyattsville
Hemming, Ernest S., Easton
Higgins, Wilfred E., Gaithersburg
Hoopes, Herbert R., Bel Air
Langeluttig, Ira L., Baltimore
Lillie, Rupert B., Washington, D. C.
Madigan, George F., Washington, D. C.

Marth, Paul C., Easton
Pennnington, Norman E., Kennedyville
Plaza, Galo L., Glen Ridge, N. J.
Ramsburg, Morris M., Ellicott City
Randall, William A., Washington, D. C.
Remsburg, Robert K., Middletown
Ribnitzki, Fred W., Washington, D. C.
Sanders, William L., Havre de Grace
Schreiber, Arthur H., Chevy Chase, D. C.
Smallwood, Walter L., Washington, D. C.
Spicknall, Norval H., Hyattsville
Van Williams, Viron, Baltimore
Wagner, Richard D., Washington, D. C.
Ward, John H., Crisfield
Zahn, Delbert, Washington, D. C.

SOPHOMORE CLASS

Ahalt, Arthur M., Middletown
Anderson, William H., College Park
Baker, Kenneth W., LeGore
Bewley, John P., Berwyn
Biggs, Gerald A., Mt. Lake Park
Bikle, Austin H., Smithsburg
Clark, Otway L., Ellicott City
Coddington, James W., Friendsville
de la Torre, Carlos, Baltimore
Dix, Jefferson, College Park
Downey, Lawrence E., Williamsport
Etienne, Wolcott L., Berwyn
Frazier, Willis T., Washington, D. C.
Henry, David R., Lewistown
Holter, D. Vernon, Middletown

Holter, Samuel H., Middletown
Linder, Paul J., Washington, D. C.
Long, Henry F., Hagerstown
Marshall, Frederick H., Washington, D. C.
McFadden, Elihu C., Port Deposit
McPhatter, Delray B., Berwyn
Miller, Charley B., Accident
Miller, G. Austin, Middletown
Naill, Wilmer H., Taneytown
Parks, John R., Sparks
Pryor, Robert L., Lantz
Robinson, Harold B., Silver Spring
Savage, John B., Baltimore
Ward, James R., Gaithersburg
Willis, Colonel C., New Market
Woods, Mark W., Berwyn

FRESHMAN CLASS

Ady, Irvin D., Sharon
Beall, John B., Frostburg
Blackistone, Shaw, Washington, D. C.
Blandford, Samuel S., College Park
Boyd, Henry C., Rising Sun

Carlis, Ernest A., Windber, Pa.
Carter, George R., Pocomoke
Coblentz, Manville E., Middletown
Cramer, William F., Walkerville
Davis, Herbert L., Washington, D. C.

Duley, Thomas C., Croom Station
 Duncan, John M., Washington, D. C.
 Eby, James W., Sabillasville
 Eiler, Charles M., Union Bridge
 England, Ralph L., Rising Sun
 Evans, Willard P., Jr., Pocomoke
 Firor, Robert M., Thurmont
 Fishpaw, Raymond R., Berryville, Va.
 Ford, Vernon O., Suffolk, Va.
 Freeman, Irving, Baltimore
 Geary, Howard W., Baltimore
 Gross, Clifford L., White Hall
 Hanna, William M., White Hall
 Hardy, George D., Branchville
 Hardy, William H., Branchville
 Hunt, Dale I., Hyattsville
 Ingersoll, Mary M., Chestertown
 Jackson, Thomas, Winamac, Ind.
 James, William T., Jr., Darlington

Wooden, Robert B., Reisterstown

TWO-YEAR AGRICULTURAL CLASS

Aubry, Luis A., Paris, France
 Bello, Luis V., Habana, Cuba
 Key, Joseph H., Chaptico

Lewis, Charles W., Manassas, Va.
 Navas, Joaquin, Jr., Nicaragua, C. A.
 Riordan, Daniel E., Washington, D. C.

Rudigier, Hugh, Baltimore

UNCLASSIFIED

Anderson, Howard H., Princess Anne
 Byrd, G. Clifford, Crisfield

Newton, Thomas A., College Park
 *Weirich, Bertha O., Hyattsville

COLLEGE OF ARTS AND SCIENCES

SENIOR CLASS

Aman, George, Hyattsville
 Barnard, Ruth, Perryville
 Billmeyer, Bruce R., Cumberland
 Budlong, Herbert N., Washington, D. C.
 Burnside, Edith F., College Park
 Burnside, Edna M., College Park
 Burroughs, George T., Upper Marlboro
 Caldwell, Stuart A., Riverdale
 Chapman, James W., III, Chestertown
 Clayton, Thompson B., Chevy Chase
 Comodo, Nicholas M., Hartford, Conn.
 Crothers, Omar D., Jr., Elkton
 Dean, Thurston N., Washington, D. C.
 De Marco, James A., Washington, D. C.
 Di Stasio, Frank, New Haven, Conn.
 Eichenholtz, Sidney N., New York City
 Einhorn, Samuel E., Newark, N. J.
 Ensor, C. Truman, New Windsor
 Epstein, Herman, Centreville
 Fletcher, William, Washington, D. C.
 Foreman, Claire L., Washington, D. C.
 Gause, Clemencia A., Washington, D. C.
 Guertler, Albert L., Schuylkill Haven, Pa.

Hammack, Olyure M., Marbury
 Holland, John E., Jr., Princess Anne
 Holzapfel, Henry III, Hagerstown
 Holzapfel, William M., Hagerstown
 Hudson, James B., Jr., Stockton
 Hughes, Warren B., Washington, D. C.
 Insley, Richard C., Salisbury
 Insley, Wade H., Jr., Salisbury
 Israelson, Reuben H., Baltimore
 Jones, J. Russell, Laurel
 Kahney, Norma M., Baltimore
 Kaminsky, Aaron L., Newark, N. J.
 Keenan, John L., Windber, Pa.
 Kessler, Gordon A., Washington, D. C.
 Kreider, Harold L., Hyattsville
 Kress, Phyllis W., Johnstown, Pa.
 Lamar, William L., Washington, D. C.
 Laughlin, Rose A., Cumberland
 Linton, Fred B., Takoma Park
 McGann, Burton A., Washington, D. C.
 McNeil, Walter G., Jr., Baltimore
 Mead, Irene C., College Park
 Norton, John H., Jr., Hagerstown

Oland, George C., Olney
 Ort, Harry C., Midland
 Page, William T., Jr., Chevy Chase
 Palmer, Marian K., Philadelphia, Pa.
 Parris, Donald S., Clayton, Del.
 Peaseley, Harriette V., Richmond, Va.
 Philips, Alice P., College Park
 Pincus, Morris H., Brooklyn, N. Y.
 Plumley, Walter P., Jr., Takoma Park
 Pollock, A. Scott, Washington, D. C.
 Rosenberg, Morris M., Brooklyn, N. Y.
 Rosenfeld, David A., Washington, D. C.
 Rosenstein, Sidney, Jersey City, N. J.
 Sangston, Howard E., Washington, D. C.
 Schueler, John E., Relay
 Sellman, Frances L., Beltsville

JUNIOR CLASS

Barnsley, Cathrine D., Rockville
 Barry, Joseph C., Washington, D. C.
 Beck, William O., Harve de Grace
 Benner, James H., Washington, D. C.
 Blake, Alan F., Marion
 Blenard, Christian D., Hagerstown
 Bowman, Harry D., Hagerstown
 Boyd, Richard K., Connellsville, Pa.
 Boyer, Roswell R., Baltimore
 Bradley, William L., Hyattsville
 Bullard, Marian P., Riverdale
 Bush, John M., Hampstead
 Caples, Delmas, Reisterstown
 Carmichael, Elizabeth L., Riverdale
 Chaffinch, William, Easton
 Clafin, Marguerite A., College Park
 Clark, R. Duncan, Chevy Chase
 Cobey, W. W., Quincy, Fla.
 Collins, Richard L., Washington, D. C.
 Colosimo, Vincent J., Frostburg
 Conk, Robert H., Long Branch, N. J.
 Cook, Albert C., Frostburg
 Covington, William W., St. Michaels
 Dean, H. Albert, Frederick
 Evans, William W., Chevy Chase
 Everstine, Carl N., Cumberland
 Fishkin, Samuel W., Linden, N. J.
 Fooks, S. Virginia, Preston
 Frame, C. W., Hyattsville
 Franklin, Frank A., Orange, N. J.
 Friedman, Hyman P., Brooklyn, N. Y.
 Gallup, Adelaide D., Harrisburg, Pa.
 Gardiner, John L., Berwyn
 Goldstein, Morton A., Baltimore
 Gordon, Samuel, Washington, D. C.
 Gorgas, Herbert D., Baltimore
 Haines, Ernest V., Washington, D. C.
 Hale, Walker A., Washington, D. C.

Shepherd, Edward A., Hyattsville
 Simmons, Robert C., Takoma Park, D. C.
 Smink, Douglas, Baltimore
 Snouffer, Edward N., Jr., Buckeystown
 Speiden, Gertrude C., Riverdale
 Stiffler, Bartram F., Silver Spring
 Sturgis, Virginia M., Hyattsville
 Sugar, Jeanette C., Washington, D. C.
 Teitelbaum, Harry A., Brooklyn, N. Y.
 Temple, Margaret E., Riverdale
 Tenney, Hazel J., Hagerstown
 Watson, Hazel E., Hancock
 Wenger, Benjamin E., Washington, D. C.
 Wertheimer, Philip, Frederick
 Wick, Robert M., Washington, D. C.
 Winnemore, Augustine E., Chevy Chase

Nevius, J. Donald, Branchville
 Nichols, Myers L., Fairmont, W. Va.
 Norwood, Alice S., Bethlehem, Pa.
 Nowell, William P., Washington, D. C.
 Porter, Phil. L., Washington, D. C.
 Powers, Jerrold V., Hyattsville
 Radice, Julius J., Washington, D. C.
 Ridout, Evalyn S., Annapolis
 Roberts, George H., Washington, D. C.
 Robertson, John V., Ridgewood, N. J.
 Robinson, Daniel R., Brooklyn, N. Y.
 Roseberry, Byron L., Baltimore
 Rosenbaum, Irving H., Newburgh, N. Y.
 Rosenbaum, William T., New York City
 Satulsky, Emanuel M., Elizabeth, N. J.
 Schilling, Barbara, Cumberland
 Schlegel, Harry F., Washington, D. C.
 Schultz, Joseph R., Upperco
 Scoles, Peter S., Long Branch, N. J.
 Scott, William H., Ocean City
 Sedlacek, Joseph A., Towson
 Settle, Robert T., Baltimore
 Simmons, Benjamin S., Washington, D. C.

Snyder, Gerald T., Windber, Pa.
 Spector, Samuel A., Baltimore
 Stackhouse, Howard, Jr., Palmyra, N. J.
 Stimpson, Edwin G., Washington, D. C.
 Tawney, Chester W., Harve de Grace
 Thorne, Walter A., Riverdale
 Umbarger, John N., Bel Air
 Valliant, Edwin S., Centreville
 Voris, Lucy R., Laurel
 Warcholy, Nicholas P., Glen Rock, N. J.
 Ward, Julius R., Paris
 Ward, David J., Jr., Salisbury
 White, Richard M., Hyattsville
 Whiteley, Millard S., Preston
 Williams, Loris E., Takoma Park, D. C.
 Wilson, Harry N., Ingleside
 Wilson, James S., Washington, D. C.
 Wilson, William K., Chevy Chase
 Winnemore, Lawrence P., Chevy Chase
 Wisner, Margaret, Takoma Park
 Wright, Genevieve G., Washington, D. C.
 Ziegler, Edward S., Baltimore
 Zimmerman, Fred, New York City

SOPHOMORE CLASS

Allen, John P., Baltimore
 Ambrose, Paul M., Legonier, Pa.
 Andrews, James E., Cambridge
 Barnes, Allen W., Salisbury
 Batson, John T., Chevy Chase
 Beachy, Melvin E., Grantsville
 Beall, Robert W., Bethesda
 Beauchamp, Frank P., Baltimore
 Becker, Bernard, Baltimore
 Behymer, Wilbur L., Baltimore
 Bennett, Charles C., Washington, D. C.
 Berenstein, Stanley H., Baltimore
 Bernard, Madeline M., Washington, D. C.
 Bischoff, John L., Washington, D. C.
 Blount, Virginia D., College Park
 Blount, V. Lenore, College Park
 Bowers, Arthur D., Hagerstown
 Boyd, Marye D., Washington, D. C.
 Bromley, George F., Chincoteague, Va.
 Brouillet, George H., Holyoke, Mass.
 Bundick, Victoria A., Stockton
 Burgdorf, George E., Baltimore
 Burhans, William H., Hagerstown
 Butz, Harry P., Washington, D. C.
 Caldara, Joseph D., Mt. Savage
 Carman, Perry W., Baltimore
 Carrico, Rudolf A., Bryantown
 Chertkof, George, Baltimore
 Chiswell, Lawrence R., Washington, D. C.
 Claggett, Reverdy J., Washington, D. C.
 Cohen, Morris M., Hyattsville
 Connell, Walter, West Grove, Pa.

Copes, George N., Baltimore
 Cosimano Joseph M., Washington, D. C.
 Crentz, William L., Washington, D. C.
 Dixon, Darius M., Oakland
 Duckman, Simon S., Brooklyn, N. Y.
 Dunne, Theresa F., Baltimore
 Eadie, Orrin C., Washington, D. C.
 Eckenrode, Edythe D., Reisterstown
 Eisenberg, Emilie C., Lonaconing
 Eisenstark, Julius, Brooklyn, N. Y.
 Ensor, Reba V., Sparks
 Epstein, Bennie F., Centreville
 Ewald, August L., Baltimore
 Frankel, Oscar L., East Orange, N. J.
 Franklin, Charles A., Washington, D. C.
 Friedman, Abraham, New York City
 Garreth, Ralph, Philadelphia, Pa.
 Gaylor, Robert, Branchville
 Gelman, Sidney, Paterson, N. J.
 Gilbert, Engel L., Frostburg
 Gilbert, Irvin H., Frostburg
 Glass, Maryvee, Clarendon, Va.
 Goldstein, Albert, Baltimore
 Gomborov, A. David, Baltimore
 Gott, Winson G., Jr., Annapolis
 Hammersley, William L., Jr., Washington, D. C.
 Harlan, Edwin, Baltimore
 Harris, Lester W., Washington, D. C.
 Harris, Walter G., Washington, D. C.
 Hartge, William P., Galesville
 Hasson, George B., Perryville

Hatfield, M. Rankin, Washington, D. C.
 Hendlich, Milton G., Fair Lawn, N. J.
 Hendrickson, George O., Frederick Junct.
 Henry, John B., Hancock
 Hess, Harry C., Baltimore
 Hoffa, Inez J., Barton
 Hoffman, Candler H., Hyattsville
 Hunt, Josiah A., Berwyn
 Hunt, Walter E., Plymouth, Mass.
 Jones, Elgar S., Olney
 Jones, Thomas E., Cambridge
 Jones, Wilbur A., Pittsville
 Kafer, Oscar A., Edward, N. C.
 Keane, John K., Riverdale
 Kelly, James P., Towson
 Kinnamon, Howard F., Jr., Easton
 Koons, Mary E., College Park
 Kovalcik, Nicholas G., Passaic, N. J.
 Ladd, Niven F., Washington, D. C.
 Ladson, Jack A., Olney
 LaQuay, Kenneth B., Hyattsville
 Leaman, Grantville M., Brunswick
 Lemer, Samuel T., Newark, N. J.
 Leof, Leonard G., Elkins Park, Pa.
 LeRoy, John P., Washington, D. C.
 Leyking, William H., Washington, D. C.
 Linton, Anne J., Takoma Park
 Loy, Thomas L., Hagerstown
 Lung, Clarence W., Smithsburg
 May, Marian L., Hyattsville
 McIntire, Carl O., Oakland
 Medley, Walter C., Mt. Rainier
 Milburn, Harry E., Kensington
 Mims, Elizabeth B., Washington, D. C.
 Mitchell, Warren C., Chevy Chase, D. C.
 Myers, Wilbur G., Washington, D. C.
 Nachlas, Bernard, Baltimore
 Needle, Harry K., Baltimore
 Neidhardt, John W., Baltimore
 Norwood, Hayden E., Washington, D. C.
 Oglesby, Samuel C., Girdletree
 Zeigler, Charles E., Houtzdale, Pa.

FRESHMAN CLASS

Ackerman, William B., Washington, D. C.
 Aiello, Umberto S., Hyattsville
 Albrittain, John W., La Plata
 Aldridge, William F., Mount Savage
 Allen, John D., Groton, Mass.
 Alonso, Miguel A., Palmer, Porto Rico
 Aponte, Federico, Hato Rey, Porto Rico
 Applefeld, Irving, Baltimore
 Bachman, Irving, Baltimore
 Baerwald, Rudolph K., Sparrow's Point
 Baker, William E., New Windsor
 Baldwin, Frank G., Jr., Orange, Conn.
 Baxter, McClellan F., Baltimore

O'Hare, George J., Hyattsville
 Pagana, Charles C., Renovo, Pa.
 Parker, Henry W., Berlin
 Rabbitt, Warren E., Washington, D. C.
 Reedy, Robert J., Washington, D. C.
 Riehl, Louis M., Lansdowne
 Ridsen, Richard A., College Park
 Roberts, Richard R., Hyattsville
 Robinson, Murry M., Baltimore
 Rosen, Bernard, Baltimore
 Ross, Charles R., Hyattsville
 Rude, Gilbert B., Washington, D. C.
 Savage, John W., Rockville
 Shank, Mark B., Middletown
 Shapiro, Julius A., Washington, D. C.
 Siegel, Benjamin, Baltimore
 Silverman, Sidney S., Brooklyn N. Y.
 Smith, William B., Salisbury
 Spencer, Oscar L., Washington, D. C.
 Spitznagle V. E., Fruitland
 Stevens, Edward C., Washington, D. C.
 Sugar, Samuel J., Washington, D. C.
 Sullivan, Vance R., Baltimore
 Troth, James R., Chevy Chase
 Truitt, May H., Salisbury
 Tudor, Clinton C., Washington, D. C.
 Unger, Arley R., Hancock
 Veitch, Fletcher P., College Park
 Vieweg, George L., Jr., Wheeling, W. Va.
 Waghelstein, Julius M., Baltimore
 Warfel, Robert W., Harve de Grace
 Wells, David E., Gaithersburg
 West, Preston E., Washington, D. C.
 Whiting, Henry J., Washington, D. C.
 Wilk, Laudis A., Whiting, Ind.
 Willard, Roberta I., Berwyn
 Willis, Dewey E., Mt. Rainier
 Wittig, Elizabeth B., College Park
 Wolf, Anne E., Hyattsville
 Yasner, Benjamin, Newark, N. J.
 Yellen, Reuben A., Revere, Mass.

Busbey, Ridgaway J., Laurel
 Butler, Evelyn N., Mt. Airy
 Caminita, Lucifer L., Scranton, Pa.
 Cannon, Harry T., Baltimore
 Cannon, Minna R., Takoma Park
 Castleman, Eli A., Baltimore
 Chideckel, Morton, Baltimore
 Cissel, Cornelius W., Washington, D. C.
 Clare, Henry J., Riverdale
 Clayton, Harry K., Mt. Rainier
 Cochran, Richard K., Silver Springs
 Cogswell, William K., Pikesville
 Cohen, Albert B., Brooklyn, N. Y.
 Cohen, Bernard S., Baltimore
 Cohen, Irving, Passaic, N. J.
 Collins, Stewart A., Riverdale
 Cooper, Jules, Atlantic City, N. J.
 Coplin, George J., Elizabeth, N. J.
 Crandall, Bowen S., Chevy Chase
 Cronin, Norman P., Aberdeen
 Curtin, Elmer P., Dundalk
 Daugherty, Charles H., Crisfield
 David, Harry W., Baltimore
 Davids, Clifford B., Baltimore
 Decker, James S., Frederick
 De Stephano, Frederick B., Union City, N. J.
 Dezendorf, May, Washington, D. C.
 Diggs, Ruth E., Catonsville
 Disharoon, Robert E., Nanticoke
 Doerr, John D., Washington, D. C.
 Dressel, George, Mt. Rainier
 Dudley, Irma R., Washington, D. C.
 Duvall, Harry M., Landover
 Dyott, J. Spencer, Easton
 Dyson, John E., Great Mills
 Eberle, Marian G., Hyattsville
 Eby, Herbert O., Washington, D. C.
 Elliott, Margaret L., Easton
 Emerson, Edward C., Branchville
 Feeser, DeWitt H., Chevy Chase
 Fisher, Raymond A., Washington, D. C.
 Fisher, William T., Frederick
 Flook, Meredith A., Burkittsville
 Fouts, Charles W., Washington, D. C.
 Frankel, Nathan, East Orange, N. J.
 Fuchs, Robert H., Washington, D. C.
 Gardner, Donald J., State Sanatorium
 Garrett, Robert A., White Hall
 Gilchrest, Homer, Nyack, N. Y.
 Goad, Otis, Norrisville
 Goldinher, Herman, Newark, N. J.
 Gough, Thomas L., Laurel
 Greely, James C., Jr., Gloucester, Mass.
 Hammel, John C., Baltimore
 Hammerlund, Don F., Washington, D. C.
 Harper, Alan J., Ten Hills

Harrison, Ernest I., Laurel
 Hauptman, William, New York City
 Hauver, Arthur L., Middletown
 Havell, Robert B., Washington, D. C.
 Hayden, Albert C., Washington, D. C.
 Heap, Allen W., Washington, D. C.
 Hebb, Arthur, Jr., Baltimore
 Helfgott, Aaron H., Baltimore
 Hemp, John A., Burkittsville
 Hersberger, Arthur B., Barnesville
 Higgins, Richard W., Washington, D. C.
 Hisle, John W., Washington, D. C.
 Holland, Albert, Easton
 Hunt, Lydia H., Berwyn
 Hyson, Harry C., Hampstead
 Invernizzi, Fred W., Baltimore
 Ireby, Richard B., Washington, D. C.
 Johnson, Richard M., Cumberland
 Jones, Jacob L., Annapolis Junction
 Kaplan, Abner J., Williamsport
 Kaplan, Maurice A., Baltimore
 Karasik, Abe S., Baltimore
 Kaufman, Robert H., Canton, O.
 Kelly, Roger M., Towson
 Kent, Alice E., Pylesville
 Kight, Arnold C., Cumberland
 King, Raymond S., Washington, D. C.
 Kingsbury, James T., Jersey City, N. J.
 Kline, Richard F., Frederick
 Klinefelter, Harriett A., Baltimore
 Knoblock, Jay E., Dundalk
 Knowles, Edwin F., Jr., East Orange, N. J.
 Koons, Edwin H., Catasauqua, Pa.
 Kraft, Edwin M., Carrollton
 Krajcovic, Jesse J., Dundalk
 Krasausky, John W., Baltimore
 Krout, Russell I., Cockeysville
 Kuhn, Henry, Cumberland
 Kunkowski, Mitchell F., Baltimore
 Levine, Edna, New York City
 Levy, Louis S., Washington, D. C.
 Lewis, Archie C., Kingston
 Littleton, Robert C., Hagerstown
 Long, Bryant A., Edmonston
 Long, John R., Washington, D. C.
 Luers, Catherine E., Bowie
 Luers, Maude V., Bowie
 Luney, William M., Cabin John
 Magruder, Lorraine Y., Hagerstown
 Margerum, Eleanor W., Washington, D. C.
 Markowitz, Louis J., New York City
 Marlow, Francis L., Berwyn
 Martin, Edith I., Baltimore
 May, Charles A., Washington, D. C.
 Mays, Howard B., Cockeysville
 McCallister, William R., Baltimore

McDonald, Henry B., Alexandria, Va.
 McKay, Warren, Hackensack, N. J.
 Mech, Karl F., Baltimore
 Meyer, Theodore F., Washington, D. C.
 Miller, Abe, Rochester, New York
 Miller, John W., Anapolis Station
 Miller, Mary M., Grantsville
 Miller, Sydney D., Reisterstown
 Mordica, John W., Sparrow's Point
 Morris, Kenneth L., Pylesville
 Mudd, Mabel F., Philadelphia, Pa.
 Mullikin, Sara L., Baltimore
 Murphy, Maurice J., Washington, D. C.
 Neal, Floyd A., Hurlock
 Neff, Thomas B., Washington, D. C.
 Nestor, Kathleen L., Washington, D. C.
 Nevius, Laura M., Branchville
 Nicholson, Morris J., Dundalk
 Nigaglioni, Herman, Yauco, Porto Rico
 Norris, John C., Pittsburgh, Pa.
 Oberlin, Robert C., Ridgewood, N. J.
 Openshaw, George F., Washington, D. C.
 Owens, Alfred A., Washington, D. C.
 Parks, Douglas M., Cockeysville
 Parlato, Edward J., Derby, Conn.
 Pease, Alfred A., Steelton, Pa.
 Pergler, Carl, Washington, D. C.
 Petty, Mary E., Washington, D. C.
 Phillips, Luther L., Delmar
 Pierpont, Roger L., Woodlawn
 Pogorelskin, Milton A., Baltimore
 Purnell, William H., Ocean City
 Pyle, Gilpin O., Philadelphia, Pa.
 Pyle, Charlotte E., Frederick
 Reeder, Robert C., Jr., North East
 Rinehart, Charles W., Chewsville
 Ronkin, Edward, Bayonne, N. J.
 Rooney, Thomas O., Washington, D. C.
 Rose, Margaret B., Hyattsville
 Rosen, Sol., Bridgeton, N. J.
 Rosenstock, Charles, Ellenville, N. Y.
 Roth, John C., College Park
 Russell, John C., Maddox
 Sacksman, Edward, Elizabeth, N. J.

Zimmerman, Gordon K., Washington, D. C.

UNCLASSIFIED

Auchter, Catherine B., College Park
 Brechbill, Lulu L., College Park
 Graybill, Mary R., College Park
 Hottel, Lulu W., College Park

Phillips, Dorothy R., Takoma Park
 Seigle, Solomon S., Washington, D. C.
 Smith, Katharine D., College Park
 Travis, Vista H., Henderson, Ky.

EXTENSION CHEMISTRY COURSE (BALTIMORE)

Hopkins, Edward S., Baltimore
 Johnson, Mildred, Baltimore
 Kenny, William R., Baltimore

Lentz, George A., Baltimore
 Rockwell, Paul O., Baltimore
 Wylie, H. Boyd, Baltimore

SCHOOL OF DENTISTRY

SENIOR CLASS

Abrams, Allen, Newark, N. J.
 Allanach, Francis Gordon, New London, Conn.
 Aronson, Murray, Bayonne, N. J.
 Belford, Julius Eugene, Bayonne, N. J.
 Berberich, Frank Charles, Brooklyn, N. Y.
 Bergen, Francis Joseph, Jr., Waterbury, Conn.
 Bernstein, Isadore Irving, New York, N. Y.
 Bloom, Samuel, Annapolis
 Bobys, Ernest Everett, Washington, D. C.
 Bowers, Mark Edwin, Moores Store, Va.
 Boyer, Lloyd Luther, Harrisburg, Pa.
 Brand, Ralph Alexander, Morgantown, West Va.
 Brauer, Benjamin Bernard, Jersey City, N. J.
 Brice, Oliver Tydings, Annapolis
 Bruskin, Lawrence Thomas, New Brunswick, N. J.
 Buttermore, Charles William, Uniontown, Pa.
 Capone, Joseph Albert, Providence, R. I.
 Clendenin, George B., Wilmington, N. C.
 Conway, Joseph Michael, Girardville, Pa.
 Cranwell, Aloysius P., Union City, N. J.
 Dobbs, Edward Clarence, Springfield, Mass.
 Drake, A. Dudley, Newark, N. J.
 Eadie, Hugh William, Bloomfield, N. J.
 Ehrlich, Herman, Harrison, N. J.
 Fancher, Morris Colburn, Winsted, Conn.
 Fogelman, David Dudley, Paterson, N. J.
 Gordon, Alan Leslie, Baltimore
 Grace, Raymond Dobson, South Amboy, N. J.
 Green, Maxwell, Atlantic City, N. J.
 Greenberg, Herbert Herman, Annapolis
 Grossman, Leon Carl, Elizabeth, N. J.
 Harber, Morris I., Asbury Park, N. J.
 Harold, Frederic Samuel, New Haven, Conn.
 Heeseman, Gary, Charlotte, N. C.
 Hill, Harry Hansford, Charleston, West Va.
 Hogan, Cornelius D., Mt. Holly, N. J.
 Holroyd, Trevor, Athens, West Va.
 Johnson, Howard Melvin, Morgantown, West Va.
 Joyce, Lee Andrew, Providence, R. I.
 Kaplan, Ben B., Bayonne, N. J.
 Kaplan, Irving Herman, Newark, N. J.
 Lane, Hubert William, Hillside, N. J.
 Lawlor, James Patrick, Waterbury, Conn.
 Lazzell, John William, Baltimore
 Levy, Montague Samuel, Newburgh, N. Y.
 Lewis, James Fitzgerald, Parksley, Va.
 Lurie, Julius Joseph, Newark, N. J.
 McCurdy, Clarence Richard, Cameron, West Va.
 McLeod, Thomas Donald, Upper Montclair, N. J.
 Mariani, Thomas Emil, Jr., Bayonne, N. J.
 Martindale, John Alexander, Ansted, West Va.
 Matzkin, Max Norman, Waterbury, Conn.
 Meyer, Cord, Jr., Savannah, Ga.
 Meyer, William Leo, Baltimore
 Michniewicz, Joseph Anthony, Bellows Falls, Vt.
 Moore, Floyd Hummer, Marydel
 Munkittrick, Alfred Graham, Long Island, N. Y.
 Murray, Charles Francis, New Bedford, Mass.
 O'Connor, Frank Joseph, Jr., Norfolk, Va.
 Oertel, Carl Henry, Baltimore
 Ohlund, Paul Quentin, New Haven, Conn.
 O'Malley, Alfred Edward, Clinton, Mass.
 Page, Ludolphus Graham, Yanceyville, N. C.
 Patterson, Lloyd Wilson, Cumberland
 Phillips, Francis Wendell, Providence, R. I.
 Pomroy, Granville, Presque Isle, Maine
 Preis, Kyrle William, Baltimore
 Quillen, Frederick Carl, Baltimore
 Quinn, Lawrence Stephen, New Bedford, Mass.
 Ramsden, George Francis, Hoboken, N. J.
 Richter, Theodore Alfred, Milltown, N. J.
 Roberts, Edwin James, Jr., Westernport
 Robin, Milton, New York, N. Y.
 Robles, Cecilio, Porto Rico
 Rose, Benjamin Alva, Meadow Bridge, West Va.
 Rosen, Sol, Newark, N. J.
 Sandberg, Max, Baltimore
 Savitz, Maurice Jacob, Roxbury, Mass.
 Scheidt, Charles Howard, Baltimore
 Schwarz, William Charles, Elizabeth, N. J.
 Seeley, Elwood Woodrow, Presque Isle, Maine
 Shaffer, Samuel Wilson, Greensboro, N. C.
 Sharpley, John Haywood, Key West, Fla.
 Sherlock, John Van Deursen, Plainfield, N. J.
 Shpiner, Harry Ben, Newark, N. J.
 Silber, Samuel E., Newark, N. J.
 Slavik, Clarence Roger, Nutley, N. J.

Smith, James Crigler, Madison, Va.
 Spitzer, Lynden Neese, Mt. Jackson, Va.
 Springer, Robert Gordon, Austin, Texas
 Stamp, Frank E., Reading Center, N. Y.
 Stang, John Thomas, Jersey City, N. J.
 Stephenson, Henry Lewis, Garysburg, N. C.
 Thomas, Nelson John, Baltimore
 Tierney, Henry Edward, Clinton, Mass.
 Tirpak, Eugene Joseph, Glen Rock, N. J.
 Trundle, William Edward, Port Arthur, Texas
 Tulacek, Rudolph Smith, Baltimore

Walker, J. Fremont, Saranac Lake, N. Y.
 Watkins, Sheridan Newton, North Braddock, Pa.
 Weiner, Simon Louis, Elizabeth, N. J.
 Weisler, Herman Lewis, Uncasville, Conn.
 Weitz, Edward, Brooklyn, N. Y.
 Williams, Norton Thomas, New Haven, Conn.
 Willin, John Martin Clayton, Jr., Oak Grove, Del.
 Wilson, James William, Mount Airy
 Wolf, S. Lloyd, Washington, Pa.

JUNIOR CLASS

Braunstein, Benjamin, Passaic, N. J.
 Buday, Albert, Bridgeport, Conn.
 Chanaud, Norman Pierre, Union City, N. J.
 Cook, Edward Russell, Childs
 Gentry, Curtis H., Spartanburg, S. C.
 Gerstein, Irwin, Brooklyn, N. Y.
 Harlacher, Anthony John, Progress, Pa.
 Hult, Elon Addison, Ocean Grove, N. J.
 Lapow, Albert, Newark, N. J.
 Leggett, Laurence Lionel, Uhrichsville, Ohio
 McAloose, Carl, McAdoo, Pa.
 Mc Nerney, Francis Joseph, Williamsport, Pa.
 Maguire, John Francis, Atlantic City, N. J.
 Messor, Michael Benjamin, Providence, R. I.

Miller, Julius, Bayonne, N. J.
 Mogilowsky, Solomon, Brooklyn, N. Y.
 Nelson, Hilbert Andrew, Freeport, N. Y.
 Noll, John Byron, New Haven, Conn.
 Pierce, Carl Rock, Norfolk, Va.
 Reiss, Sam, Brooklyn, N. Y.
 Schein, Irving, Newark, N. J.
 Schwartz, Philip, Newark, N. J.
 Sheinblah, Joseph, Elizabeth, N. J.
 Shupp, Isaac Hamilton, Hagerstown
 Slattery, George Benjamin, Montclair, N. J.
 Smith, James Winston, Lincolnton, N. C.
 Sobol, Edward Aaron, Hartford, Conn.
 Spitzen, Percival, Elizabeth, N. J.
 Wilkerson, George Earl, Baltimore
 Wolf, John Washington, Carlisle, Pa.
 Zamecki, Theodore Martin, Baltimore

PRE-JUNIOR CLASS

Aldrey, Jorge M., Porto Rico
 Barnes, Edwin Clarke, Woodbury, N. J.
 Buchbinder, Milton, Bayonne, N. J.
 Cline, Reginald William, Hartford, Conn.
 Cohen, Jacob Reuben, Bayonne, N. J.
 Corvino, Joseph, Bayonne, N. J.
 Cross, John Douglas, Mt. Washington
 Cummings, Owen Vincent, Torrington, Conn.
 Curry, Christian Landis, Harrisburg, Pa.
 Dillon, Charles S., Jamaica, B. W. I.
 Drumheller, Wallace Griffiths, Lansford, Pa.
 Durso, James, Bayonne, N. J.
 Edwards, Douglas Arthur, Belford, N. J.
 Eskin, Albert Carl, Newark, N. J.
 Fetter, Luther Werner, Schaefferstown, Pa.
 Fornarotto, Sam Frank, Jr., Long Branch, N. J.
 Friedman, Max Benjamin, Bloomfield, Conn.
 Gilfoyle, Alex Edward, Cortland, N. Y.
 Gunther, Edgar, Fort Howard
 Hahn, William Edward, Westminster
 Hamilton, Lloyd, Baltimore

Hayes, Arthur John, Newark, N. J.
 Icaza, Carlos, Nicaragua, C. A.
 Kania, Joseph Stanley, New Britain, Conn.
 Kearfott, Clarence Wiley, Baltimore
 Kiker, Russell Paul, Baltimore
 Kohn, Arthur Arnold, Bayonne, N. J.
 Lankford, Allan Morris, Pocomoke
 Lareska, Anthony Peter, Scranton, Pa.
 LaVallee, Raymond Edward, Burlington, Vt.
 Leichter, Sam Findling, Orange, N. J.
 Levin, Jacob, Bayonne, N. J.
 Lewis, Gordon Alexander, Hagerstown
 Lyons, Harry Witherell, Newton, Mass.
 Margeson, Clarence Elmer, Jr., Clarksburg, West Va.
 Markley, Harry Knox, Warfordsburg, Pa.
 Miller, John William, Martinsburg, W. Va.
 Minahan, Walter Richard, Sparrows Point
 Nadal, Alfredo M., Porto Rico
 Nirenberg, Max, New Rochelle, N. Y.
 Nuttall, Ernest Brodey, Sharptown
 Pedlosky, Fred, Irvington, N. J.
 Reese, Edgar B., Fairview, West Va.

Richardson, David Horn, Halethorpe
 Rostov, Henry E., Baltimore
 Santillo, Joseph Salvatore, Newark, N. J.
 Saunders, Clarence Ervin, Florence, S. C.
 Shapiro, Emanuel, Newark, N. J.
 Smyth, Frederick Francis, Quincy, Mass.
 Zukovsky, Julius Milton, Passaic, N. J.

SOPHOMORE CLASS

Abramson, Isadore, Baltimore
 Ainsworth, Clifford Francis, Jersey City, N. J.
 Applegate, Charles Robert, South River, N. J.
 Ball, Edward Jenkinson, Paterson, N. J.
 Bamdas, Sam, Newark, N. J.
 Basch, Carl, Lakewood, N. J.
 Beamer, Charles Samuel, Cumberland
 Berman, Nathan, Jersey City, N. J.
 Bessette, Edgar Leo, Providence, R. I.
 Black, John Aloysius Jr., Paterson, N. J.
 Boxer, Joseph, Newark, N. J.
 Breslow, Isadore Irving, Perth Amboy, N. J.
 Broadrup, Charles Easterday, Frederick
 Bryant, Samuel Hollinger, Chester, Pa.
 Carrico, Louis Gerard, Bryantown
 Chandler, Thomas Shirley, Cape Charles, Va.
 Cheney, Leon Austin, Midland, Mich.
 Clayton, Paul Ramon, Lansdale, Pa.
 Coleman, John William, Jersey City, N. J.
 Corrigan, John Dennis, New Bedford, Mass.
 Crapanzano, Mark, New Haven, Conn.
 Dern, Carroll Duttera, Taneytown
 Deterding, Samuel Frederick, Johnstown, Pa.
 Doneson, George Julius, Perth Amboy, N. J.
 Edmonds, Henry Jeter, Kilmarnock, Va.
 Emory, Russell Jump, Centreville
 Englander, Jesse Julius, Bridgeport, Conn.
 Farrington, Donald Wilson, Chelmsford, Mass.
 Feldblum, Joseph Israel, Chicora, Pa.
 Fern, Arthur Louis, Hartford, Conn.
 Frankel, Nathan Noah, Asbury Park, N. J.
 Garrett, Raymond Daniel, Waynesboro, Pa.
 Gitlin, Joseph Donald, New London, Conn.
 Goodkin, Ben, Passaic, N. J.
 Graves, Raymond John, New Haven, Conn.
 Grosshans, George Thomas, Bridgeport, Conn.
 Hergert, Carl Adam, Wilkes-Barre, Pa.
 Hester, William Andrew, Nutter Fort, West Va.

Snyder, Elwood Stanley, East Orange, N. J.
 Tew, Jasper Jerome, Dunn, N. C.
 Tracy, Harold Joseph, Jersey City, N. J.
 Wasilko, Dan Julius, Lansford, Pa.
 Winner, Harry James, Baltimore
 Wojnarowski, L. Edward, Ansonia, Conn.

Hill, Edwin Eugene, Elbridge, N. Y.
 Hills, Merrill Clarke, Hartford, Conn.
 Hogan, William Joseph, Hartford, Conn.
 Hunt, Robert Nathaniel, Lexington, N. C.
 Jennings, Ernest Miller, Hartford, Conn.
 Johnston, Hammond Lee, Baltimore
 Jones, Ward B., Forest City, Pa.
 Kaplan, Irving, Bayonne, N. J.
 Katz, Herbert F., Miami, Fla.
 Kendrick, Vaiden Blankenship, Charlotte, N. C.
 Kendrick, Zebulon Vance, Jr., Charlotte, N. C.
 Kershaw, Arthur James, Jr., West Warwick, R. I.
 Laughlin, Harry Josiah, Chestertown
 Linder, Norman, Bayonne, N. J.
 Lott, Harland Winfield, Forest City, Pa.
 McGarry, Charles Edward, Baltimore
 MacKenzie, Hector MacDonald, Prince Edward Island, Canada
 Madden, James Elmore, New Market, Va.
 Maldonado, Miguel Leon, Porto Rico
 Manuel, Joseph Robert, Baltimore
 Michael, John Hayward, Roanoke, Va.
 Miller, Herbert Lester, Elizabeth, N. J.
 Milliken, Lyman Francis, Annapolis
 Morgan, Tonnie Garmore, Pineville, W. Va.
 Mott, Carl Burns, Asheville, N. C.
 Muir, Francis, Jr., Arlington, N. J.
 Newman, Irving, Union City, N. J.
 Niosi, Joseph Peter, North Bergen, N. J.
 Oliva, Angelo Raymond, Newark, N. J.
 Pike, Richard Isaac, Catonsville
 Prather, Richard Bain, Clear Spring
 Reid, Harry Mitchell, Lisbon Falls, Maine
 Remy, Rudolph Rodrick, Webster, Mass.
 Rosen, Ben Louis, Baltimore
 Rosenbaum, Irving Eugene, Kearny, N. J.
 Rosenbloom, Reuben, Passaic, N. J.
 Sidle, Abraham Frank, Glen Burnie
 Steigelman, Jay Monroe, Barnitz, Pa.
 Theodore, Alfred Edgar, Baltimore
 Thrall, Ralph Botsford, Plainville, Conn.
 Vajcovec, Joseph Louis, Webster, Mass.
 Vederman, Minnie, Baltimore
 Vezina, George Onesime, Woonsocket, R. I.
 Waldman, Harold Francis, Bridgeport, Conn.

Weitzel, Henry Marcus, Carlisle, Pa.
 White, Arthur Roland, Hancock
 Wickes, Joseph Salyards, New Market, Va.

FRESHMAN CLASS

Bailey, Richard Anson, Orange, Conn.
 Barclay, Robert S., Dry Run, Pa.
 Barnett, Irving Harold, Asbury Park, N. J.
 Bernstein, Louis Coleman, New York, N. Y.
 Bisnovich, Samuel Sidney, Waterbury, Conn.
 Block, Philip Leonard, Baltimore
 Boff, Solomon, Elizabeth, N. J.
 Boote, Howard Sherry, Bel Air
 Bowers, Malcolm Baker, Wellfleet, Mass.
 Brener, Herman, Asbury Park, N. J.
 Britowich, Arthur A., Newark, N. J.
 Brotman, Abe, Newark, N. J.
 Brownell, Dudley Curtis, Pulaski, N. Y.
 Cohen, Jonas Sydney, Carbondale, Pa.
 Diamond, Gustave, Perth Amboy, N. J.
 Diamond, Leo Lloyd, Long Branch, N. J.
 Diaz, Ernest Davila, Porto Rico
 Duryea, David Henry, Hawthorne, N. J.
 Eichman, Peter Wynne, Waterbury, Conn.
 Eriksen, Alf, Spring Lake, N. J.
 Flory, Arlington Ditto, Thurmont
 Fruchtbaum, David Pearson, Newark, N. J.
 Gaebel, William Louis, Cumberland
 Garmansky, Harry Jay, Asbury Park, N. J.
 Gibson, Wesley Carver, Havre de Grace
 Gillman, Charles, Newark, N. J.
 Ginsburg, Aaron Albert, Lakewood, N. J.
 Goe Reed T., Weston, W. Va.
 Goldiner, Morton Joseph, Baltimore
 Goldstein, Lewis, Perth Amboy, N. J.
 Gordon, Jacob, Baltimore
 Gothers, John Leonard, Hartford, Conn.
 Guida, Frank Joseph, Elizabeth, N. J.
 Gurvitz, Robert Herbert, Newark, N. J.
 Gutstein, Leon, Baltimore
 Hall, Henry Herbert, Annapolis
 Hamilton, Bruce Putnam, Northborough, Mass.
 Harrison, Earle Francis, Bridgeport, Conn.
 Helfmann, Nathaniel Leonidas, Newark, N. J.
 Hoffman, Emanuel, Baltimore
 Hogan, James Francis, Hartford, Conn.
 Holter, Paul Wilson, Baltimore
 Homel, Samuel, Baltimore
 Horchowsky, Leon Leonard, New Haven, Conn.
 Horwitz, George, Grantwood, N. J.
 Hoy, John Alfred, Shippensburg, Pa.
 Husk, Arnold Doremus, Mountain Lakes, N. J.

Wiggins, Albert, Glenwood Landing, N. Y.
 Wilson, Roy McCown, Raphine, Va.
 Wolfe, Milton, New York, N. Y.

Icaza, Jorge, Nicaragua, Central America
 Isralow, Abraham, Long Island, N. Y.
 Itzkowitz, Jack Meyer, Perth Amboy, N. J.
 Jaen, Erasmo, Nicaragua, Central America
 Janofsky, David, Baltimore
 Janowitz, Aaron Jack, Glen Rock, N. J.
 Jones, Claude Charles, Jr., Monroe, La.
 Kingsley, Dudley Joseph, New Brunswick, Canada
 Kowalski, Walter Joseph, Mocanaqua, Pa.
 Krasnow, George, Jersey City, N. J.
 Kwan, Hok Wan, Tientsin, China
 Levine, Alexander, Weehawken, N. J.
 Lilla, Nicholas Alfred, Providence, R. I.
 Lora, Edward James, Union City, N. J.
 McGuire, Richard Francis, New Haven, Conn.
 Maciolek, Stanley Julian, Chicopee, Mass.
 MacWhinnie, Milton, Easton, Maine
 Mansell, Howard Coffin, Maplewood, N. J.
 Merlin, Murray, Asbury Park, N. J.
 Moore, Filbert LeRoy, Baltimore
 Moxley, John Howard, Jr., Baltimore
 Murphy, Paul Friend, Clay, W. Va.
 Nathan, Morris Harry, Hartford, Conn.
 Nussbaum, Milton, Newark, N. J.
 O'Brien, John R., Red Bank, N. J.
 Paiz, Benito, Nicaragua, Central America
 Paquette, Normand Jean, New Bedford, Mass.
 Piombino, Joseph, Jr., Bloomfield, N. J.
 Pyle, David Harlan, York, Pa.
 Reed, Allen John, Lorraine, N. Y.
 Rodriguez, Demetrio, Porto Rico
 Rosenberg, William Edwin, Weehawken, N. J.
 Russell, Oneal Franklin, Eastport
 Ryan, Hubert Francis, Waterbury, Conn.
 Sachs, Sylvan, Baltimore
 Schindler, Samuel Edward, Hagerstown
 Schreiber, Jerome, Newark, N. J.
 Schwarzkopf, Anton James, Miami Beach, Fla.
 Shirey, Alvah Ephraim, York, Pa.
 Shulman, Joseph, Weehawken, N. J.
 Somarriba, Roberto, Nicaragua, Central America
 Steinfeld, Irving, Newark, N. J.
 Stramshi, Alphonse, Danvers, Mass.
 Sullivan, Sterling St. Clair, York, Pa.
 Taylor, Henry M., Philadelphia, Pa.
 Tocher, Robert John, Seymour, Conn.

Totels, John, Bristol, Conn.
 Toubman, Joseph William, Hartford, Conn.
 Trax, Frederick Hiram, Warren, Pa.
 Turnamian, Levon Charles, Woodcliff, N. J.

Wertz, Theodore Howard, Hanover, Pa.
 Wheeler, Arthur Stanley, Baltimore
 Wheeler, George Edmund, Jr., Port Jefferson, N. Y.
 Wick, Mahlon Newton, Woodbury, N. J.
 Wollak, Charles, Baltimore

COLLEGE OF EDUCATION

SENIOR CLASS

S Beall, Dorothy L., Chevy Chase
 Corkran, Philip, Rhodesdale
 Cramer, B. B., Walkersville
 S Dickerson, Mary G., Linwood
 S Freeny, Eleanor P., Delmar, Del.
 S Garber, Elizabeth M., Washington, D. C.
 Getty, Frank J., Grantsville
 S Glading, Rebekah F., Lanham
 S Hadaway, Ella J., Rock Hall
 S Herzog, Emily C., Washington, D. C.
 S Hislop, Mildred A., Hyattsville
 S Kooker, Nellie R., Westernport
 S Kreider, Hazel B., Hyattsville
 S Lighter, M. Grace, Middletown
 Linkous, Fred C., Pylesville
 S Maisch, Frances G., Hagerstown
 S Matthews, Anne R., Worton
 McWilliams, James O., Rhodesdale

S Morris, Naomi M., Salisbury
 S Murray, Mary E., Mt. Savage
 Myers, Warren G., Thurmont
 S Neely, Helen F., Brookeville
 S Nicht, Theresa B., Frostburg
 S Nickell, V. Estelle, Rising Sun
 Parsons, John B., Washington, D. C.
 S Pierce, Marcia E., Washington, D. C.
 S Price, Anna L., Queenstown
 Ramsay, Preston W., Delta, Pa.
 S Robey, Carrie E., Beltsville
 S Rogers, Mary C., Riverdale
 S Ryon, Audrey C., Waldorf
 S Santinie, Antoinette A.
 S Siehler, Adele M., Catonsville
 Wallace, Marion W., Sudlersville
 S Walter, Blanche E., Fulton
 Whiteford, Henry S., Baltimore

Wilson, C. Merrick, Ingleside

JUNIOR CLASS

Algire, George W., Hampstead
 Ballou, Evelyn F., Washington, D. C.
 Bean, Robert C., Washington, D. C.
 Bennett, William O., Princess Anne
 Bewick, Isabel D., Cumberland
 Brower, Margaret E., Washington, D. C.
 Chesser, Carolyn S., Pocomoke
 Dodder, Margaret R., College Park
 Dunnigan, Margaret R., Washington, D. C.
 Harrison, Roberta, Washington, D. C.
 Hartenstein, Helena J., New Freedom, Pa.
 Hirshey, Frances, Baltimore
 Howard, Roberta D., Hyattsville
 Karr, Margaret, Bethesda
 Kefauver, J. Orville, Middletown

Kroll, Wilhelmina D., Washington, D. C.
 LaMotte, Jane A., Baltimore
 Lane, Marion E., Washington, D. C.
 Leighton, Margaret V., Mt. Lake Park
 Lowe, Erma L., Pylesville
 Lowe, Ora B., Pylesville
 Martin, George J., Emmitsburg
 Morgan, Claudine M., Lonaconing
 Moser, Edward F., Thurmont
 Nathanson, Rosalie, Leonardtown
 Nourse, Curry, Dawsonville
 Ryon, Elsie E., Waldorf
 Taylor, Alice E., Perryville
 Townsend, Louise S., Girdletree
 Wondrack, J. Arthur, Washington, D. C.

SOPHOMORE CLASS

Archambault, Charles J., McIntosh, S. D.
 Arnold, Julia C., Brentwood
 Baumel, Eleanor N., Royal Oak
 Blaisdell, Dorothy J., Washington, D. C.
 Bremen, John J., Aberdeen
 Bull, Gladys M., Pocomoke City
 Cook, Margaret E., Washington, D. C.
 Cooper, Bert M., Still Pond

Deitz, Leah S., Hyattsville
 Derr, Melvin H., Frederick
 Gall, Mable L., Thurmont
 Gray, F. Adelaide, Port Tobacco
 Hammack, Jane E., Washington, D. C.
 Hunt, Robbia, Berwyn
 Lawler, Sydney T., Washington, D. C.
 McGarvey, Margaret D., Washington, D. C.

Nelson, Thorman A., Cambridge
 Payne, Stella E., Hyattsville
 Robertson, Marinda L., Hyattsville
 Rowe, Norma, Brentwood
 Simmonds, Christine L., New York City
 Smith, Virginia, Hyattsville

FRESHMAN CLASS

Arrel, Margaret R., Towson
 Aspinall, Dorothy L., Frostburg
 Babcock, Louise G., Washington, D. C.
 Bailey, Charles H., Hyattsville
 Bishop, Doris R., Washington, D. C.
 Boswell, Aileen H., Washington, D. C.
 Bowling, Mary B., Newport
 Bradshaw, Lois F., Relay
 Burslem, William A., Hyattsville
 Chalmers, George V., Newark, Del.
 Clemson, Charlotte B., Baltimore
 Colborn, W. Hope, Princess Anne
 Cooke, Virginia B., Washington, D. C.
 Daiker, Barbara V., Washington, D. C.
 Davis, Thomas G., Frostburg
 DeBoy, Dora F., Solomons
 Faber, S. Parker, Washington, D. C.
 Ferrier, Myra V., Hyattsville
 French, Doris, Brentwood
 Glynn, Maurice J., Lonaconing
 Greenwood, Ruth E., Washington, D. C.
 Hatton, Rhoda K., Washington, D. C.
 Hickox, Alma, Washington, D. C.
 Hoffman, Henry P., Washington, D. C.
 Horwitz, George, Grantwood, N. J.

Snyder, Dorothy L., Berwyn
 Snyder, George G., Clear Spring
 Spicknall, Florence L., Hyattsville
 Spoerlein, Harley H., Accident
 Wade, Margaret E., Port Tobacco
 Wilson, Walter S., Highland

Jones, Hilda, Davidsonville
 Kern, Isabel E., Takoma Park
 Klein, Vera L., Frederick
 Leatherbury, Beatrice I., Shady Side
 Linzey, Dorothy T., Laurel
 McCoy, Grace E., Beltsville
 McCubbin, Frances R., Jewell
 Miller, Charles, Baltimore
 Miller, Thomas L., Baltimore
 Norton, Elizabeth W., Hyattsville
 Oldenburg, Grace M., Hyattsville
 Reed, Ruth V., Baltimore
 Rosen, Rose S., Bridgeton, N. J.
 Rugge, Marjorie L., Ridgewood, N. J.
 Santinie, Maria A., Burtonsville
 Sellman, Theodore A., Beltsville
 Smith, Claude H., Manassas, Va.
 Staley, William T., Knoxville
 Stanforth, Elsie V., Mt. Rainier
 Stier, Howard L., Glenelg
 Stinnette, Edith B., Havre de Grace
 Stone, Margaret G., Port Tobacco
 Taylor, Charlotte M., College Park
 Travers, William W., Nanticoke
 Tupper, Margaret L., Hyattsville

UNCLASSIFIED

Lovell, Jeanette E., Brentwood

Whiton, Abigail, Brentwood

EXTENSION TEACHER-TRAINING COURSES (BALTIMORE)

(INDUSTRIAL EDUCATION)

Addison, Grace E.
 Anderson, Charles R.
 Arnold, Edward J.
 Ayers, Lewis S.
 Ball, Harry C.
 Balsam, Frank A.
 Bell, Raymond E.
 Blackiston, James T.
 Boylan, Edward M.
 Boylan, William G.
 Burkert, Claude A.
 Burton, Julia
 Chelton, Ruth L.
 Cooper, Harry W.
 Cromack, Joseph T.
 Dallam, Sara T.

DiCesare, Nicholas
 Donelson, Raymond N.
 Douglass, Hazen
 Edwards, Paul C.
 Elgert, John E.
 Emlet, Dorothy E.
 Emmer, Joseph E.
 Farrow, Blanche S.
 Fisher, Irma
 Galley, Joseph N.
 Gardner, Harry K.
 Gilbert, Loren G.
 Griffith, Jeanette W.
 Haefner, William F.
 Haffner, Emanuel B.
 Hartman, S. Alberta

Haslup, DeWilton W.
Hedrick, Melvin D.
Heylmun, Stanley L.
Hoffacker, George W.
Jolly, William H.
Kehm, Marguerite
Klepper, Charles E.
Kruse, Lillian
Kuehn, Peter
Longley, E. LeRoy
Marx, Morris F., Jr.
Matthews, Edna H.
Maziuravic, John W.
McFarland, Marjorie
Meyers, George A.
Mietzsch, Daisy P.
Miller, Mayfort P.
Mitchell, Frances M.
Myers, William
Nicol, Lindsay
Pumphrey, Anthony J.
Pund, Ruth L.
Purnell, Andasia
Raabe, Herbert L.

Randall, Roland E.
Rivkin, Leon
Rock, Charles V., Jr.
Rohde, Clarence
Rosenstein, Nelson A.
Sauer, John A.
Schmidt, Martha B.
Scott, Charles E. P.
Smith, Ferdinand C.
Spencer, Ethel B.
Stansbury, Wilton P.
Swift, Lillian
Sweetland, Theodore R.
Tyler, Jane
Volland, Frederick
Watkins, Robert S.
White, Clinton E. W.
White, Gertrude C.
Wilkison, John W.
Willhide, Elsa H.
Willhide, Paul A.
Wiegman, Elgert L.
Winter, Ralph A.
Ziefle, Howard E.

COLORED TEACHERS

Beverly, Sadie B.
Briscoe, Joseph C.
Brown, Alexander
Bryant, Patricia G.
Buchanan, Mamie V.
Callis, James A. B.
Chase, Sadie E.
Clark, Lloyd A.
Cook, Ralph V.
Davis, Lee A.
Echols, David A.
Fisher, Gladys C.
Ginn, Sylvester W.
Henry, Antoinette O.
Johnson, Carrie A.
Johnson, Tazewell A.
Jones, Reuben F.
Kyler, Margaret E.

Kyler, Mary E.
Lancaster, Alonzo
Long, Oscar W.
Martin, James G., Jr.
Moore, James E.
Moore, Levi V.
Moulton, Herbert C.
Price, Emma D.
Reed, Milton
Sewell, Mary N.
Smith, Guy W.
Stokes, Melissa
Tinnen, Ernest E.
Traynham, Hezekiah E.
Washington, Howard E.
Williams, Leon W.
White, Frances T.
Wynn, Vernice H.

COLLEGE OF ENGINEERING

SENIOR CLASS

Atkinson, Walter S., Pocomoke
Barto, John C., Cordova
Blakeslee, Raymond D., Washington, D. C.
Bock, James D., Mt. Rainier
Bomberger, Lawrence J., College Park
Bowman, Julian, Germantown
Bryan, W. Leo, Washington, D. C.
Caldwell, Charles H., Baltimore

Cashell, Harry D., Washington, D. C.
Colburn, Raymond, Havre de Grace
Dauber, Rudolph W., Washington, D. C.
Dodd, Arthur E., Salisbury
Duvall, John C., Washington, D. C.
Dyer, Ben, Washington, D. C.
Elliott, William H., Oxford
Evans, Robert, Washington, D. C.

Fox, Henry C., Baltimore
 Froehlich, Arthur A., West Palm Beach,
 Fla.
 Gessford, Ross K., Washington, D. C.
 Graham, Thomas H., Washington, D. C.
 Grieb, William E., Washington, D. C.
 Hall, Jay V., Washington, D. C.
 Hitch, Robert A., Washington, D. C.
 Holloway, William W., Salisbury
 Iager, Raymond F., Washington, D. C.
 Just, Charles H., Landover
 Koons, Charles V., Washington, D. C.
 Lang, John C., Pocomoke City
 Leach, John M., Washington, D. C.
 Loane, Emmett T., Baltimore

Whitlock, Charles F., Baltimore

Munroe, Benjamin, Jr., Takoma Park,
 D. C.
 Pisapia, Edward A., Washington, D. C.
 Putnam, William D., Garrett Park
 Russell, W. Irvine, Washington, D. C.
 Schofield, William C., Washington, D. C.
 Slack, John C., Washington, D. C.
 Stephens, Francis D., Washington, D. C.
 Thomen, Harold O., Washington, D. C.
 Van Allen, Ralph C., Washington, D. C.
 Vierkorn, Jack C., Washington, D. C.
 Wallett, Fred D., Havre de Grace
 Weirich, Alfred F., Hyattsville
 Welsh, Robert R., Washington, D. C.
 Wheeler, Henry E., Bel Air

JUNIOR CLASS

Ahalt, Chauncey A., Middletown
 Bishop, Charles B., Washington, D. C.
 Boublitz, Harry D., Baltimore
 Buehm, Graef W., Washington, D. C.
 Burr, Richard A., Rockville
 Cameron, James N., North East
 Cerrito, Anthony F., Baltimore
 DeMarr, James D., Mt. Rainier
 Dodson, Charles R., Takoma Park
 Epple, Richard J., Ridgewood, N. J.
 Falkenstine, N., Mt. Lake Park
 Fifer, William H., Galesville
 Gordon, James M., Takoma Park
 Gregory, James A., Washington, D. C.
 Harper, Luther, Cumberland
 Hine, Howard H., Baltimore
 James, Carroll S., Frederick
 Jarvis, Harry A., Berlin
 Jarvis, Kendall P., Berlin
 Kesecker, Kenneth S., Washington, D. C.
 Kushner, Paul L., Baltimore
 Letvin, Samuel, Washington, D. C.

Wilson, William S., Salisbury

Lininger, Floyd R., Westernport
 Lippard, Foster E., Washington, D. C.
 Lloyd, Madison E., Cockeysville
 Lockridge, Robert W., Edmondston
 Lombard, Herman, Washington, D. C.
 Perham, John E., Hagerstown
 Phipps, George T., Washington, D. C.
 Price, Milton M., Washington, D. C.
 Quinn, Robert F., Washington, D. C.
 Roberts, Eugene J., Washington, D. C.
 Schramm, Harry B., Cumberland
 Sehorn, Hale F., Washington, D. C.
 Speer, Roland L., Washington, D. C.
 Talbot, Dorrance, Wortendyke, N. J.
 Tansill, Roy B., Baltimore
 Taylor, Norman L., Salisbury
 Tinsley, Garland S., Washington, D. C.
 Vogel, Leonard J., Washington, D. C.
 Wallace, James N., Washington, D. C.
 Walters, Francis P., Cumberland
 Wilcox, Charles F., Chevy Chase
 Willmuth, Charles A., Kenilworth, D. C.

SOPHOMORE CLASS

Ackerman, Carl J., Washington, D. C.
 Allen, Robert H., Groton, Mass.
 Basford, Alvin, Washington, D. C.
 Bonnet, Walter, Washington, D. C.
 Buckingham, Hugh W., Washington, D. C.
 Burger, John R. M., Jr., Hagerstown
 Cashell, Charles F., Washington, D. C.
 Chaney, Robert L., Washington, D. C.
 Chew, William F., Jr., Pikesville
 Claflin, Frederick F., College Park
 Clary, John G., Washington, D. C.
 Coe, Gerald B., Silver Hill
 Cooper, Philip C., Salisbury
 Cowgill, Perry P., Glenndale
 Hanback, Bryant L., Washington, D. C.

Hargis, George R., Frederick
 Dabson, T. Paul, Greensboro
 Deckman, Joseph H., Bel Air
 de la Torre, Mario, Baltimore
 Dent, Walter P., Jr., Oakley
 Doran, Willis M., Randallstown
 Ewald, Edward L., Mt. Savage
 Fellows, Paul D., Washington, D. C.
 Fiorucci, Louis C., Baltimore
 Fisher, William A., Jr., Baltimore
 Flory, Maurice P., Harmans
 Gifford, William R., Washington, D. C.
 Gossom, Richard B., Haymarket, Va.
 Grohs, Conrad E., Washington, D. C.
 Gue, Edwin M., Germantown

Henshaw, Lamond F., Chevy Chase
 Hoffman, Carl O., Washington, D. C.
 Holloway, Francis L., Hebron
 Horne, Robert C., Somerset
 Jones, R. Bernard, Dickerson
 Kibler, Alfred G., Greensboro
 Kirby, John F., Anacostia
 Klein, Alvin S., Frederick
 Kline, Donald L., Washington, D. C.
 Lee, James A., Oakland
 Leister, Edgar N., Hampstead
 Maloney, Ercell L., Washington, D. C.
 McClurg, Gregg H., Washington, D. C.
 Miller, David S., Washington, D. C.
 Mitton, John H., Washington, D. C.
 Moser, LeRoy C., Boonsboro
 Mowatt, Theodore A., College Park
 Munson, Gerald L., Hyattsville
 O'Neill, John T., Washington, D. C.
 Orwig, Robert H., Jr., Parkton
 Parran, Thornton W., Calvert
 Peyton, John W., Washington, D. C.

Willse, Edwin M., Hohokus, N. J.

FRESHMAN CLASS

Albaugh, Charles R., Frederick
 Allen, James C., Bethesda
 Barrett, Robert L., Fort Leonard Wood
 Beall, John R., Washington, D. C.
 Berger, Louis W., Fort Myer, Va.
 Bishoff, Theodore, Washington, D. C.
 Bogan, Charles W., Washington, D. C.
 Briddell, Charles D., Jr., Crisfield
 Burdick, Walter F., Hyattsville
 Burton, Fred C., Cumberland
 Butts, Wesley E., Washington, D. C.
 Cooper, Herbert W., Washington, D. C.
 Crump, Charles F., College Park
 Crusoe, Charles E., Aquasco
 Diener, Herman M., Washington, D. C.
 DiFilippo, Philip J., Baltimore
 Dobbs, Harry C., Hyattsville
 Early, Charles S., Brandywine
 Ebaugh, Frank C., Jr., Washington, D. C.
 Eskridge, Hazard S., Fort Leonard Wood
 Fall, Milton S., Washington, D. C.
 Franklin, John M., Oakland
 Gary, Fred B., Washington, D. C.
 Gibson, Hatcher R., Washington, D. C.
 Gifford, Charles H., Washington, D. C.
 Goss, Willard L., Lanham
 Gotthardt, William H. S., Washington, D. C.
 Grogan, Leslie S., Newburgh, N. Y.
 Hale, Jack E., Towson
 Hamilton, Joseph, Hyattsville
 Harrison, Evelyn B., Washington, D. C.

Pitzer, John W., Cumberland
 Rhind, Harold S., Washington, D. C.
 Roberts, Richard E., Baltimore
 Roberts, W. Edward, Washington, D. C.
 Scott, Henry M., Jr., Laurel
 Seaman, Milton L., Takoma Park
 Shank, Lloyd P., Middletown
 Siddall, W. Edward, Washington, D. C.
 Smith, Robert H., Washington, D. C.
 Snyder, Robert O., Randallstown
 Spence, David R., Hancock
 Stabler, Albert, Jr., Spencerville
 Stacy, Harry A., Jr., Takoma Park
 Suter, Jesse C., Takoma Park, D. C.
 Swick, Edgar H., Capitol Heights
 Taylor, George E., Jr., Annapolis
 Waesche, Douglas A., Sykesville
 Wales, Ira L., Jr., Glyndon
 Wenger, Frederick J., Washington, D. C.
 Wildensteiner, Otto, Washington, D. C.
 Wilhelm, John M., Connellsville, Pa.
 Williamson, Alfred E., Laurel

Harry, David G., Jr., Pylesville
 Hawkins, Stuart F., Washington, D. C.
 Higgins, Horace R., Washington, D. C.
 Hoffman, Conrad W., Washington, D. C.
 Hoke, Lloyd H., Emmitsburg
 Holland, Edward S., Chevy Chase, D. C.
 Horton, John, Washington, D. C.
 Hunt, Howard Clifford, Frostburg
 Hussey, William B., Washington, D. C.
 Iglehart, Malcolm W., Ellicott City
 Jackson, William R., Tilghman
 Jones, Lloyd J., Dickerson
 Kay, Alfred J., Elk Mills
 Kent, Benjamin G., Baltimore
 Knight, Richard D., Washington, D. C.
 Koelle, Raymond W., Altoona, Pa.
 Kronowitz, Morris, New York City
 Lake, Archibald M., Rockville
 Lawrence, Frederick V., Wood's Hole, Mass.

Leonard, Frederic B., Chevy Chase
 Linkins, William H., Washington, D. C.
 Loughran, James E., Swissvale, Pa.
 Lusby, Maurice I., Prince Frederick
 Lynn, George M., Cumberland
 Marshall, Thomas C., Washington, D. C.
 Matthews, George H., LaPlata
 McGlathery, Samuel E., Jr., Washington, D. C.
 McManus, Edward M., Washington, D. C.
 Medbery, Aldrich F., Washington, D. C.
 Merrick, C. Percival, Jr., Ingleside

Meyer, Edwin G., Washington, D. C.
 Miller, Joseph, Washington, D. C.
 Norris, George W., Jr., Annapolis
 Porras, Luis G., Colombia, South America
 Potter, Gordon V., Washington, D. C.
 Price, John H., Centreville
 Reeves, Raymond J., Washington, D. C.
 Reyes, Arnoldo, Nicaragua, Central America
 Roberts, Lawrence M., Baltimore
 Roome, Henry S., Hyattsville
 Roth, Albert C., College Park
 Rudden, Joseph, Washington, D. C.
 Ruhl, George R., Washington, D. C.
 Schindler, George E., Watertown, Mass.
 Schneider, Louis G., Baltimore
 Shoemaker, Maynard P., Jr., Chevy Chase
 Silverberg, Morton, Washington, D. C.

Zeiler, Ned S., Frederick

EXTENSION CLASSES IN MINING

BARTON CLASS

Arnold, D. W.
 Ashby, R. M.
 Bradley, John
 Brennan, E. R.
 Broadwater, Cecil A.
 Cooling, Gilbert C.
 Crowe, George H.
 Gattens, James
 Griffith, Curtis
 Guy, J. P.
 Hoffa, Arthur P.
 Hughes, John T.
 Hyde, Chester A.
 Hyde, William
 Kyle, Reginald
 Magruder, Frank
 McDonald, K. M.
 Moffett, Richard
 Mowbray, Thomas
 Robertson, Joseph
 Shuhart, Joseph
 Symons, Charles E.
 Thomas, Carson
 Wallace, John
 Watson, Martin L.

CRELLIN CLASS

Lewis, W. J.
 Murphy, William H.
 O'Haver, John
 Ream, Charles W.
 Ream, E. W.
 Ream, Harold E.
 Savage, Okey
 Shaffer, Reed W.
 Thayer, R. T.

FINZEL CLASS

Baker, Arthur
 Baker, Clyde
 Baker, Edward
 Baker, J. Frank
 Baker, Lester
 Baker, William
 Barmoy, C. C.
 Burdock, Marshall
 Finzel, George
 Hostetter, Robert
 House, James H.
 Larue, Cecil
 Layman, Jonas
 McKenzie, Jesse
 Nickel, Florian
 Warner, Albert
 Warner, Cecil
 Warner, James
 Warner, John
 Warner, Nelson

Allen, George
 Brode, Leo
 Brown, Charles
 Byrnes, Bernard D.
 Brynes, Terrance
 Carter, Frank W.
 Casey, John L.
 Cesnick, John
 Cesnick, Louis
 Cesnick, William J.
 Close, James H.
 Creegan, Patrick
 Cullen, Daniel
 Cullen, Henry
 Cunningham, James H.
 Dennison, Allan
 Donahue, William J.
 Dunn, James N.
 Dye, Herbert
 Edwards, R. L.
 Festerman, Walter
 Glotfelty, Robert
 Hartig, Philip, Jr.
 Hawkins, Richard
 Jenkins, Edward

Brogden, Clarence L.
 Friend, Ernest
 Gibbs, Robert
 Harvey, Russell
 Jackson, Robert H.
 Jones, Casimer
 Lantz, A. L.

Beard, Howard
 Beavers, George E.
 Bennett, Howard
 Biggs, Edgar
 Bosley, Charles W.
 Duckworth, Austin
 Elliott, Robert
 Ervin, Albert C.
 Evans, Luther
 Evans, Morgan
 Faherty, John J.
 Fazenbaker, Floyd A.
 Flick, A. V.
 Fox, E. G.
 Green, Nelson
 Howard, Charles
 Howard, Raymond
 Johnson, Oscar
 Jones, David
 Jose, William
 Kalbaugh, Earl C.

FROSTBURG CLASS

Kamauf, Emil
 Kerr, John
 Kilduff, Bernard
 Knieriem, Oscar
 Komatz, Anton
 Lloyd, Henry
 McKenzie, William H.
 McNeal, Leo
 Meagher, Victor
 Owens, Charles
 Parise, Thomas
 Patterson, Adam
 Plummer, Archie
 Powers, Clarence J.
 Rephorn, William H.
 Richardson, George
 Smith, Ben
 Smouse, John L.
 Stevens, Eugene
 Struntz, John
 Sulser, Harry
 Taylor, George
 Thomas, William H. R.
 Tippen, Walter
 Weisenborn, James A.

Wolfe, Charles P.

KEMPTON CLASS

Luzier, William C.
 Perchan, Stanley
 Ryan, Leslie
 Ryan, Richard
 Shillingbury, James
 Strinel, Frank
 Strinel, Tony

Wiegratz, Emil

WESTERNPORT CLASS

Kenner, Charles
 Kenner, Kerman
 Kenny, John J.
 Knott, E. G.
 Leatherman, Peter
 Mellon, Ben
 Miller, Howard R.
 O'Haver, Clarence
 Paugh, Charles
 Robertson, Joseph
 Smith, Chester E.
 Smith, Elmer D.
 Smith, Victor
 Spriggs, John R.
 Sutton, Oscar
 Warnick, Howard
 Westfall, Claude
 Westfall, Ernest
 Wildman, Earl
 Wilson, Jacob
 Wolfe, Charles O.

GRADUATE SCHOOL

Abrams, George J., Washington, D. C.
 Aldrich, Willard W., Baltimore
 Andrews, Marvin J., Baltimore
 Bauer, John C., Baltimore
 Beavens, Elmer A., Washington, D. C.
 Becker, Martin, East Orange, N. J.
 Berliner, Meyer, Rock Beach, N. Y.
 Berry, Myron H., West Chester, Pa.
 Blandford, J. M., College Park
 Brackbill, Frank Y., Berwyn
 Brewer, Margaret G., College Park
 Butler, George, Camden, Del.
 Butler, Margaret E., Washington, D. C.
 Carr, Ruth F., Baltimore
 Carter, Ray M., Baltimore
 Cooke, Giles B., Gloucester, Va.
 Cordner, Howard B., Provo, Utah
 Dando, Llewellyn S., Edgewood
 Degman, Elliott S., White Salmon, Wash.
 Ditman, Helen C., Riverdale
 Ditman, Lewis P., Westminster
 Eaton, Orson N., Hyattsville
 Evans, Frederick H., Washington, D. C.
 Fahey, Daniel C., Jr., Hyattsville
 Feild, Frank A., Baltimore
 Fletcher, Lewis A., Bennettsville, S. C.
 Gibson, Arthur M., Baltimore
 Gilbert, Howard W., Frostburg
 Goshorn, John C., Baltimore
 Graham, Castillo, Blodgett, Miss.
 Haines, George, Hyattsville
 Hall, Wallace L., Washington, D. C.
 Haller, Mark H., Washington, D. C.
 Harden, Wilton C., Catonsville
 Hartman, Paul C., Edgewood Arsenal
 Henery, William T., Sedalia, S. C.
 Henson, Paul R., McLoud, Okla.
 Herd, Robert L., Washburn, Mo.
 Hoerner, John L., Fort Collins, Colo.
 Horn, Millard J., Washington, D. C.
 Jarman, Gordon N., Edgewood
 Johnson, William L., Baltimore
 Kaveler, Herman H., St. Charles, Mo.
 Kibler, J. F., Baltimore
 Krabill, Verlin C., Pocomoke City
 Kuhnle, Mary E., Westernport
 Lagasse, Felix S., Newark, Del.
 Lillienfeld, Samuel, Elmhurst, N. Y.
 Little, Glenn A., Edgewood
 Lloyd, Daniel B., Glenndale
 Long, Clarence B., Cleburne, Texas
 Malcolm, Wilbur G., Hyattsville
 Mason, A. Freeman, Pasadena, Cal.

Zimmerly, Howard H., Norfolk, Va.

Matthews, William A., Portsmouth, Va.
 McColley, Rowena G., Erie, Pa.
 McConnell, Harold S., College Park
 McCurdy, Mary Jane, Washington, D. C.
 McMurtrey, James E., Jr., Washington, D. C.
 Meccredy, James R., Baltimore
 Mehring, Aaron L., Hyattsville
 Miller, Edmund E., Takoma Park
 Morse, Katharine B., Hyattsville
 Moyer, Andrew J., Lucerne, Ind.
 Newcomb, Eric M., Edgewood
 Newell, Harry J., Lansing, Mich.
 Nicholas, Ellwood R., College Park
 O'Neill, George T., Silver Spring
 Parker, Marion W., Salisbury
 Pope, Merritt N., Falls Church, Va.
 Raper, Paul A., Welcome, N. C.
 Rehberger, Elmer H., Baltimore
 Reinmuth, Otto P., Baltimore
 Riemenschneider, Roy W., Litchfield, Ill.
 Rosasco, Adelia E., Hyattsville
 Rowe, Estelle, Meyersdale, Pa.
 Rudel, Harry W., Baltimore
 Rutledge, Alma W., Washington, D. C.
 Schmidt, Engelbert H., Washington, D. C.
 Scruton, Herbert A., Baltimore
 Siegler, E. H., Takoma Park, D. C.
 Simonds, Florence T., College Park
 Slama, Frank J., Baltimore
 Smith, Charles L., Covin, Ala.
 Smith, Thomas B., Bedford, Pa.
 Spies, Joseph R., Wentworth, S. D.
 Stillings, Clara B., Baltimore
 Stoner, Kenneth G., Hagerstown
 Stoops, Charles S., Chestertown
 Straka, Robert P., Homestead, Pa.
 Stuart, William M., Washington, Va.
 Supplee, William C., Washington, D. C.
 Taylor, Ritchie P., Baltimore
 Upshall, W. Harold, Vineland Station, Ontario
 Venezky, Adelyn B., Hyattsville
 Weiland, Glenn S., Hagerstown
 Weinberger, John H., Zionsville, Pa.
 Wellington, Joseph W., Takoma Park
 Westfall, Benton B., Buckhannon, W. Va.
 Wheeler, Donald H., Baltimore
 Winterberg, Samuel H., Grantsville
 Wood, Cyrus B., Washington, D. C.
 Worthington, Katharine K., Baltimore
 York, Mary S., College Park
 Zern, Leidy D., Norristown, Pa.

COLLEGE OF HOME ECONOMICS

SENIOR CLASS

Appleman, Katharine R., College Park
Edmonds, Mena R., Hyattsville
Harbaugh, Phyllis, Washington, D. C.
Miller, Alverta P., Grantsville
Herzog, Aline E., Washington, D. C.
McMinimy, Margaret M., Washington, D. C.

JUNIOR CLASS

Bewley, S. Marguerite, Berwyn
Creeger, Margaret P., Thurmont
Dynes, Isabel, Chevy Chase
Freseman, Dorothea S., Baltimore
Harrison, E. Eames, Baltimore
Hoffa, Estelle, Barton
Lewis, Maude E., Washington, D. C.
Lunenburg, Lillian I., Washington, D. C.
Maxwell, Grace, Luke
Pressley, Margaret S., Elk Ridge
Rodier, Katherine E., Washington, D. C.
Snodgrass, Annie L., Norton, Va.

SOPHOMORE CLASS

Bishopp, Harriett E., College Park
Cullen, Marjorie V., Centreville
Gahan, Winifred, Berwyn
Jenkins, Felisa, Washington, D. C.
Kettler, Mildred A., Washington, D. C.
Kirkwood, A. Elizabeth, Baltimore
Lloyd, Miriam, Chevy Chase
Mead, Helen, College Park
Miles, Ruth L., Washington, D. C.
Oberlin, Gladys M., Silver Spring
Parry, Geraldine, Ridgewood, N. J.
Price, Nellie M., Queenstown
Robertson, Martha A., Gaithersburg
Sargent, Gwendolyn, Washington, D. C.
Symons, Isabel M., College Park
Temple, Martha R., Riverdale
Webster, Marie E., Randallstown

FRESHMAN CLASS

Bewley, Helen G., Berwyn
Bickford, Eleanor C., Berwyn
Duvall, Jane S., Cheverley
Finch, Norma G., Washington, D. C.
Goodhart, Rosalie J., Washington, D. C.
Goss, Esther, Lanham
Howes, Isabel R., Sykesville
Huffington, Sara E., Eden
King, Frances L., Frederick
Lamond, Ethel-Jean W., Takoma Park, D. C.
Lederer, Dorothy L., Riverside
Morris, Corinne N., Sykesville
Siehler, Kathryn E., Baltimore
Wells, Mary H., Cottage City
Wilkins, Dorothy, Baltimore

UNCLASSIFIED

Eaton, Effie M., Hyattsville

SCHOOL OF LAW

FOURTH YEAR EVENING CLASS

Albrecht, Clinton Wright, Baltimore
Altman, Samuel B., Baltimore
Ashman, Harry, Catonsville
Benjamin, James Leonard, Salisbury
Berman, Max Lawrence, Baltimore
Bien, David W., Raspeburg
Blum, Jack, Baltimore
Bollinger, William Daniel, Glyndon
Brown, Thomas C., Baltimore
Cardin, Meyer Melvin, Baltimore
Chambers, Robert, Baltimore
Chayt, Sidney, Baltimore
Clautice, Joseph Wilton, Baltimore
Cobb, George, Baltimore
Cohn, Phillip, Baltimore
Cooper, Benjamin Bernard, Baltimore
Danziger, Lewis, Baltimore
Davison, Irvin, Baltimore
Dillingham, Conway Cowan, Baltimore
Deponai, John Martin, Baltimore
Doyle, James L., Baltimore
Dumler, John O., Baltimore
Eser, Walter John, Baltimore
Farber, S. Sylvan, Baltimore
Fell, Ellis Malcolm, Baltimore
Flautt, Ernest Gibson, Baltimore

Fletcher, Paul Meredith, Cumberland
Flynn, Paul James, Baltimore
Freed, Irvin Felix, Baltimore
Geiselman, Austin Howard, Baltimore
Gerson, Harry Joseph, Frostburg
Ginsberg, Isidore, Baltimore
Goldring, Mavis Althea, Baltimore
Goldstein, Maurice, Baltimore
Gorfine, Charles, Baltimore
Gross, Casper John, Baltimore
Hammel, Eugene John, Baltimore
Hannan, John Patrick, Baltimore
Hardesty, J. Walter, Baltimore
Harris, Solomon Herbert, Baltimore
Hart, William Sebastian, Baltimore
Harvey, James E., Salisbury
Herzfeld, Bernard Herman, Baltimore
Hoffman, Hollen Busey, Baltimore
Horwitz, Milton Glick, Baltimore
Howard, Benjamin Chew, Jr., Baltimore
Ireton, John Francis, Baltimore
Jacobson, Bernard, Baltimore
Johnson, John Theodore, Baltimore
Katz, Harry L., Baltimore
Kessler, John Henson, Baltimore
Kloze, Alexander, Baltimore
Knapp, John Philip Diehl, Baltimore
Leithiser, William Dobson, Havre de Grace
Levin, Abraham, Baltimore
Levin, Louis, Baltimore
Libauer, Leo, Baltimore
Libauer, Meyer, Baltimore
Lion, S. John, Jr., Baltimore
Lockboehler, George Louis, Baltimore
Lyons, Charles Clinton, Baltimore
Medinger, Irwin Dwinelle, Baltimore
Menchine, William Albert, Baltimore
Meurer, Henry Williams, Jr., Baltimore
Meyer, Elbert John, Baltimore
Myer, Leo John, Baltimore

Zenitz, Oscar William, Baltimore

THIRD YEAR DAY CLASS

Arenson, Ellis Lazarus, Baltimore
Bouis, George Ezekiel, Mt. Washington
Carozza, Eugene Maximillian, Catonsville
Grillo, Vincent Richard, Annapolis
Hamilton, Daniel Heyward, Jr., Sudbrook Park
Levy, Karl Minifie, Baltimore
Seabolt, Martin W., Baltimore
Wagaman, John, Hagerstown

THIRD YEAR EVENING CLASS

Allers, Harry Waidner, Baltimore
Boone, Robert Gibson, Rogers Forge
Bornstein, Morris Michael, Baltimore
Chambers, Robert Edward, Jr., Baltimore
Cochran, John Andrew, Baltimore
Cohen, J. Samuel, Baltimore
Cook, Noel Speir, Frostburg
Coplan, Fannye Ada, Baltimore
Cromwell, E. Stanley, Baltimore
Doughney, Thomas, Baltimore
Ginsberg, Alexander B., Baltimore
Goldberg, Benjamin, Baltimore
Griffith, Arthur Edward, Baltimore
Harwood, Francis Campau, Baltimore

Howard, Joseph Harold, Waldorf
 Kindley, William E. H., Jr., Baltimore
 Kuethe, Marrian, Baltimore
 McWilliams, William James, Annapolis
 Mills, Daniel Clay, Sparrows Point
 Peach, Francis Tenant, Granite
 Poster, Tillie, Baltimore
 Rheb, Charles Fulton, Baltimore
 Rogers, Grafton Dulany, Baltimore
 Russell, Charles Elmer, Baltimore

Samuelson, Oscar, Baltimore
 Seidman, Joel Isaac, Baltimore
 Snodgrass, Ira Dale, Halethorpe
 Spates, George Paul, Jr., Baltimore
 Sterling, Thomas K. Nelson, Baltimore
 Stevens, Paul Bradley, Baltimore
 Sutton, F. Edmund, Kennedyville
 Sutton, Franklin Wilson, Baltimore
 Whiteford, W. Hamilton, Baltimore
 Zamanski, Bernard Thomas, Baltimore

SECOND YEAR DAY CLASS

Boyd, J. Cookman, Jr., Baltimore
 Buchner, Morgan Mallory, Baltimore
 Cable, John Welty, III, Chewsville
 Casey, Mary Elizabeth, Baltimore
 Chambers, Daniel Boone, Jr., Baltimore
 Jarman, Charles Malcolm, Centreville
 Pennington, Victor Power, Baltimore
 Shirley, Joseph Whitney, Jr., Reisterstown
 Townshend, Russell Harrison, Bel Alton

SECOND YEAR EVENING CLASS

Baker, Ephraim Morton, Baltimore
 Bass, Samuel, Baltimore
 Berman, Harry Howard, Baltimore
 Brown, Maurice Rome, Bladensburg
 Buckmaster, Everett LeRoy, Baltimore
 Cecil, Harold H., Catonsville
 Conner, George Atvill, Baltimore
 Conway, John Berchmans, Baltimore
 Craig, Allan James, Baltimore
 Crain, Bennett, Mt. Victoria
 Dorsey, James Hazlitt, Baltimore
 Egan, William Charles, Baltimore
 Field, Benjamin Wood, Baltimore
 Hickman, Clara Amelia, Baltimore
 Hoot, Dorothy Alberthine, Baltimore
 Johnson, S. Lloyd, Catonsville
 Lisansky, Nelson Bernard, Baltimore
 Lockwood, Herbert Lansdale, Catonsville
 McAllister, Richard Alexander, Baltimore
 McDermott, Bernard Matthew, Baltimore
 McQuaid, Wilfred Thomas, Baltimore
 Manahan, William Theodore, Sabillasville
 Margolis, Philip, Baltimore
 Mindel, Charles, Baltimore
 Mullen, Elmer Thomas, Baltimore
 Sachs, Leon, Baltimore
 Schellhase, Donald R., Hagerstown
 Shriver, George M., Jr., Pikesville
 Turnbull, John G., Towson
 Urey, Harry Bradford, Baltimore
 Watson, Xavier Joseph, Baltimore
 White, Robert Wilson, Snow Hill
 Willhide, Paul Alexander, Baltimore

FIRST YEAR DAY CLASS

Ankeney, Isaac Donald, Clear Spring
 Arnold, Bridgewater Meredith, Baltimore
 Biddison, Thomas Nichols, Baltimore
 Black, H. Ross, Jr., Hanover, Pa.
 Brown, David Stanley, Baltimore
 Carroll, J. B. Randol, Ellicott City
 Cohen, Joseph, Charleston, W. Va.
 Creed, Eugene, Jr., Frederick
 Doyle, William Hazlewood, Baltimore
 Harris, Charles David, Baltimore
 Kimmel, Samuel, Baltimore
 Littman, Simon, Baltimore
 Mitchell, James Craik, La Plata
 Robbin, Barney Morton, Washington, D. C.
 Schap, Frank Joseph, Baltimore
 Shaivitz, Sylvan, Baltimore
 Smith, William Henry Martin, Annapolis
 Wills, John B., Bel Alton
 Zulick, James Earle, College Park

FIRST YEAR EVENING CLASS

Beller, John Erle, Point Pleasant, W. Va.
 Berry, George Mauduit, Lutherville
 Blumenfeld, Milton, Baltimore
 Ciesielski, Stanley, Baltimore
 Fagan, Benjamin Howard, Baltimore
 Ferciot, Thomas Nathaniel, Baltimore
 Gundersdorff, Charles Howard, Jr., Baltimore
 Heck, Preston Patterson, Baltimore
 Hildebrandt, John Lawrence, Catonsville

Hoen, John Lloyd, Baltimore
 Kahl, Arthur Gustavus, Govans
 Kisor, Fred Verle, Baltimore
 Lee, Agnes Lewis, Baltimore
 McCandless, George Byron, Baltimore
 MacDonald, Donald D., Baltimore
 Melvin, Howard, Jr., Denton
 Meyer, Paul Herbert, Baltimore
 Myers, George Hammond, Jr., Princess Anne
 Neal, Sanford Stephen, Jr., Annapolis
 Ness, George Thomas, Jr., Baltimore

Parr, William Holton, Baltimore
 Peacock, Lawrence L., Baltimore
 Phillips, Joseph C., Baltimore
 Pincura, John David, Jr., Chester, Pa.
 Proctor, Kenneth Chauncey, Towson
 Schmidt, Emil G., Baltimore
 Small, Norman Jerome, Baltimore
 Stissel, Carl Frederick, Baltimore
 Swain, Robert Lee, Sykesville
 Tribbe, Edward William, Baltimore
 Welzant, Joseph Wilbur, Baltimore
 Zimmerman, Frederick Thomas, Baltimore

UNCLASSIFIED STUDENTS

Brocato, Charles Vincent, Baltimore
 Ferguson, William K., Baltimore
 Hampson, George Mobray, Pen-Mar
 Hipsley, S. Preston, Baltimore
 Janophy, Louis, Baltimore
 Johns, Thomas Morris, Baltimore
 Kenney, John Harold, Baltimore
 Knabe, Lloyd C., Baltimore
 Lyden, Edward, Baltimore
 McCoy, George G., Baltimore
 Miller, Harry Herman, Baltimore
 Nasdor, Harry L., Baltimore
 Renzi, William A., Baltimore
 Rice, Thomas Warren, Baltimore
 Trojakowski, Chester A., Baltimore
 Woodward, James Gardner, Annapolis

SCHOOL OF MEDICINE

SENIOR CLASS

Abramowitz, Max, Brooklyn, N. Y.
 Ackerman, Jacob Harold, Bronx, N. Y.
 Alessi, Silvio A., Baltimore
 Amos, Hugh, Cambridge, Ohio
 Anderson, Anders Walter, Baltimore
 Bardfeld, Benjamin B., Vineland, N. J.
 Barland, Samuel, New York, N. Y.
 Bernhard, Robert, New York, N. Y.
 Birely, M. Franklin, Thurmont
 Bongiorno, Henry Domenic, Passaic, N. J.
 Botsch, Bernard, Alliance, Ohio
 Bowen, James Poore, Belton, S. C.
 Brauer, Selig Leo, Jersey City, N. J.
 Calas, Andrs Eladio, Cuba
 Chambers, Earl LeRoy, Baltimore
 Chapman, William Hardee, Baltimore
 Christian, William, Nanticoke, Pa.
 Ciccone, Arnold William, Providence, R. I.
 Clark, Francis Alden, Charleston, W. Va.
 Cohen, Herman, Trenton, N. J.
 Cohen, Paul, Baltimore
 Conn, Jacob Harry, Baltimore
 Corsello, Joseph Nicholas, Brooklyn, N. Y.
 Dailey, William Paul, Steelton, Pa.
 Daniels, Willard Floyd, Elkins, W. Va.
 DeBarbieri, Fred Louis, Galetton, Pa.
 Draper, William Bateman, Baltimore
 Farbman, Meyer David, New York, N. Y.
 Fargo, William Russell, Baltimore
 Fattel, Henry Charles, Hoboken, N. J.
 Feingold, Charles Rodin, Brooklyn, N. Y.
 Feit, Emanuel, New York, N. Y.
 Fifer, Jesse Showalter, Wyoming, Del.
 Garber, Jacob S., Brooklyn, N. Y.
 Givner, David, Baltimore
 Gouldman, Edwin Foster, Colonial Beach, Va.
 Guiglia, Sascha Facchetti, Baltimore
 Haney, John James, Trenton, N. J.
 Heck, Leroy Savin, Baltimore
 Helms, Samuel Thomas, Blacksburg, Va.
 Holroyd, Frank Jackson, Princeton, W. Va.
 Horowitz, Morris, Springfield, Mass.
 Husted, Samuel Harley, Newport, N. J.
 Isern, Rafael Angel Vilar, Porto Rico
 Jackson, Murray Elliot, New Rochelle, N. Y.
 Jacobs, Abraham, New York, N. Y.
 Kelly, Clyde Ernest, Scottsdale, Pa.
 Kendall, Benjamin Horton, Shelby, N. C.
 Knight, Walter Phillips, Throop, Pa.
 Levi, Ernest, Baltimore
 Levy, Walter Howard, New York, N. Y.
 Lynn, Irving, Jersey City, N. J.
 Lynn, John Galloway, Cumberland
 McAndrew, Joseph Theodore, Clarksburg, W. Va.
 McDowell, Roy Hendrix, Cherryville, N. C.
 McGowan, Joseph Francis, McKees Rocks, Pa.

Matsumura, Junichi, Hawaii
 Meranski, Israel Peter, Hartford, Conn.
 Morgan, Isaac Joseph, Pittsburgh, Pa.
 Murphy, John Edward, Olyphant, Pa.
 Neistadt, Isidore Irving, Baltimore
 Neuman, Finley Frederick, Cleveland, Ohio
 Newman, Saul Charles, Hartford, Conn.
 Nickman, Emanuel Harrison, Atlantic City, N. J.
 Overton, Lewis Marvin, Rocky Mount, N. C.
 Penchansky, Samuel Joseph, Bayonne, N. J.
 Porterfield, Maurice Coleman, Baltimore
 Prager, Benjamin, Brooklyn, N. Y.
 Reeder, Paul A., Buckhannon, W. Va.
 Reilly, John Vincent, Newark, N. J.
 Roberts, Eldred, Westernport
 Safer, Jake Victor, Jacksonville, Fla.
 Safford, Henry Towne, Jr., El Paso, Texas
 Schreiber, Morris, Baltimore
 Schwartzback, Saul, Washington, D. C.
 Seibel, Jack, Brooklyn, N. Y.
 Sekerak, Raymond Andrew, Bridgeport, Conn.

Yudkoff, William, Bayonne, N. J.

JUNIOR CLASS

Aronofsky, Milton Robert, Hartford, Conn.
 Ashman, Harry, Brooklyn, N. Y.
 Baumgardner, George M., Taneytown
 Baylus, Meyer Milby, Baltimore
 Belinkin, William, New York, N. Y.
 Benfer, Kenneth Louis, Baltimore
 Berkowitz, Rudolph, New York, N. Y.
 Berry, Erwin Phifer, Jr., Drexel, N. C.
 Blum, Joseph Sydney, Baltimore
 Bonner, Merle Dumont, Aurora, N. C.
 Brown, Eugene Scott, Summersville, W. Va.
 Burns, John Howard, Sparrows Point
 Chance, Lester Thomas, Gibson, N. C.
 Chenitz, William, Newark, N. J.
 Cohen, Archie Robert, Baltimore
 Cohen, Irvin Joseph, Baltimore
 Cohen, Max Hurston, Baltimore
 Coppola, Matthew Joseph, New York, N. Y.
 Durrett, Clay Earle, Cumberland
 Dyar, Edna Gerrish, Washington, D. C.
 Farinacci, Charles Joseph, Cleveland, Ohio
 Faw, Wylie Melvin, Jr., Cumberland
 Feman, Jacob George, Brooklyn, N. Y.
 Fiocco, Vincent James, Brooklyn, N. Y.
 Fisher, Samuel, Paterson, N. J.
 Ford, John Leonard, Johnston, Pa.
 Forrest, Daniel Efland, Efland, N. C.
 Garey, James Lyman, State College, Pa.
 Garfinkel, Abraham, New York, N. Y.
 Gerner, Harry Ezekiel, Jersey City, N. J.

Serra, Lawrence Mario, Brooklyn
 Sikorsky, Albert Edward, Baltimore
 Silver, Mabel Irene, Baltimore
 Soifer, Albert Alexander, Baltimore
 Solomon, Milton, Brooklyn, N. Y.
 Speicher, Wilbur Glenn, Accident
 Spencer, Ernest, Bel Alton
 Spurrier, Oliver Walter, Baltimore
 Staton, Leon Raphael, Hendersonville, N. C.
 Stevenson, Charles Calvert, Baltimore
 Sullivan, William Joseph, Providence, R. I.
 Tannenbaum, Morris, New York, N. Y.
 Taylor, Charles Vivian, Baltimore
 Ullrich, Henry Franz, Baltimore
 Vann, Homer, Sebring, Fla.
 Vestal, Tom Fletcher, Winston-Salem, N. C.
 Volenick, Lee Joseph, Brooklyn, N. Y.
 Wallack, Charles Albert, Newark, N. J.
 Ward, Hugh Walter, Owings
 Waters, Zack James, Moyock, N. C.
 Weiss, Aaron, Brooklyn, N. Y.
 Wilkerson, Albert Russell, Baltimore
 Yeager, George Herschel, Cumberland

Yudkoff, William, Bayonne, N. J.

Gersten, Paul Francis, Brooklyn, N. Y.
 Ginsberg, Leon, New York, N. Y.
 Goldman, Lester Milton, Newark, N. J.
 Goldstein, Jacob Everett, Mountindale, N. Y.
 Goodman, Julius Henry, Baltimore
 Hamer, William Alexander, Rockingham, N. C.
 Harrell, Leon Jackson, Goldsboro, N. C.
 Harsha, Gene Melford, Weston, W. Va.
 Helms, John Chapman, Blacksburg, Va.
 Hildenbrand, Emil John Christopher, Baltimore
 Hill, George Delmas, Camden on Ganley, W. Va.
 Hornbaker, John Harlan, Hagerstown
 Hudson, Rollin Carl, Towson
 Jackson, Marshall Vaden, Chapel Hill, N. C.
 Johnson, Marius Pitkin, Hartford, Conn.
 Keller, Frederick Doyle, Parkersburg, W. Va.
 Kleinman, Abraham Morris, Brooklyn, N. Y.
 Kovarsky, Albert Elias, Freehold, N. J.
 Kraemer, Samuel Harry, Jersey City, N. J.
 Kremen, Abraham, Baltimore
 Kuhn, Esther Frances, Baltimore
 Levin, Morton Loeb, Baltimore
 Levy, Solomon, Palestine
 Lewis, Frank Russell, Whaleyville

Romano, Nicholas Michael, Roseto, Pa.
 Mace, Vernie Emmett, Charleston, W. Va.
 Magovern, Thomas F., South Orange, N. J.
 Maloney, Leonard Eugene, Hinton, W. Va.
 Mansdorfer, G. Bowers, Baltimore
 Miller, Benjamin Herman, Port Deposit
 Miller, Isaac, Bergen, N. J.
 Miller, James Alton, Reisterstown
 Montilla, Victor Jose, Porto Rico
 Mortimer, Egbert Laird, Jr., Baltimore
 Moser, Charles Yarnall, Terra Alta, W. Va.
 Needle, Nathan E., Baltimore
 Oliver, Robert Deleon, Princeton, N. C.
 Oppenheim, Joseph Harry, Brooklyn, N. Y.
 Owen, Duncan Shaw, Fayetteville, N. C.
 Owens, Zack Doxey, Elizabeth City, N. C.
 Perlman, Robert, Brooklyn, N. Y.
 Reid, Francis Fielding, Baltimore
 Rineberg, Irving Edward, New Brunswick, N. J.

Rosenthal, Abner Herman, Brooklyn, N. Y.
 Shill, Benjamin, Newark, N. J.
 Shulman, Louis Robert, Baltimore
 Smith, Joseph Jacob, Bridgeport, Conn.
 Snoops, George John, Jr., Baltimore
 Snyder, Nathan, Baltimore
 Soltroff, Jack Gerson, Philadelphia, Pa.
 Sperling, Nathaniel Mortimer, Brooklyn, N. Y.
 Strickland, Horace Gilmore, Nashville, N. C.
 Thompson, Carl Truman, Morgantown, W. Va.
 Warman, Wilton Merle, Morgantown, W. Va.
 Weinstein, Jack, Brooklyn, N. Y.
 Werner, Aaron Seth, Brooklyn, N. Y.
 Wolley, Alice Stone, Poughkeepsie, N. Y.
 Young, Ralph Funk, Hagerstown
 Zeiger, Samuel, Brooklyn, N. Y.

SOPHOMORE CLASS

Adalman, Philip, Baltimore
 Allen, Howard Stanley, Stewartstown, Pa.
 Andrew, David Holmes, Baltimore
 Baldwin, Kenneth Malison, Laurel
 Bamberger, Beatrice, Baltimore
 Barton, Paul Canfield, Lakewood, Ohio
 Baumgartner, Eugene Irving, Oakland
 Berman, Henry Irving, Baltimore
 Brice, Arthur Talbott, Betterton
 Brill, Bernard, Brooklyn, N. Y.
 Brill, John Leonard, Philadelphia, Pa.
 Contract, Eli, Baltimore
 Davis, Melvin Booth, Baltimore
 Dawson, William Maddren, Shelter Island, N. Y.
 Donohue, Bernard Walker, Mt. Washington
 Drenga, Joseph Francis, Baltimore
 Eckstein, Harry, Brooklyn, N. Y.
 Edel, John Wesley, Jr., Govans
 Eisenberg, David, New York, N. Y.
 Ernest, Roy Cooper, Coshocton, Ohio
 Feldman, Samuel, Baltimore
 Feuer, Arthur, New York, N. Y.
 Fitch, Wilmer Price, New York, N. Y.
 Foster, Ruth, Baltimore
 Friedman, Joseph, Brooklyn, N. Y.
 Grossman, Isadore, Baltimore
 Grove, Donald Birtner, Cumberland
 Gundry, Rachel Krebs, Baltimore
 Helfrich, Raymond Frederick, Baltimore
 Hoffman, Reuben, Baltimore
 Hollander, Mark Buckner, Baltimore
 Hornbrook, Kent M., New Martinsville, W. Va.

Jacobson, Samuel Maurice, Baltimore
 Jaklitsch, Frank Henry, Long Island, N. Y.
 Jensen, Carl Dana Fausbol, Seattle, Wash.
 Jett, Page C., Baltimore
 Jones, Arthur Ford, Cumberland
 Karger, Abraham, New York, N. Y.
 Kaufman, Max, Brooklyn, N. Y.
 Keefe, Walter Joseph, Waterbury, Conn.
 Kermisch, Albert, Baltimore
 Kilgus, John Frank, Jr., Williamsport, Pa.
 Kohn, Walter, Baltimore
 Krieger, Jerome Leon, Baltimore
 Lachman, Harry, Baltimore
 Lang, Abraham, New York, N. Y.
 Langeluttig, Harry Vernon, Baltimore
 Lerner, Philip Frank, Baltimore
 Leshine, Sidney Starr, New Haven, Conn.
 Levine, David Robert, Brooklyn, N. Y.
 Lubin, Paul, Baltimore
 Mahan, Edgar Wade, Washington, Pa.
 Mankovich, Desiderius George, Punxsutawney, Pa.
 Martin, Thomas Adrian, Asbestos
 Masterson, John Francis, Jersey City, N. J.
 Meyer, Leo Martin, Brooklyn, N. Y.
 Moyers, Waldo Briggs, Mathias, W. Va.
 Murphy, Richard Lawrence, Manchester, N. H.
 Nocera, Francisco Pablo, Porto Rico
 Palitz, Leo Solomon, New York, N. Y.
 Post, Charles Gordon, Jr., Baltimore
 Rehmeier, Walter Owen, Shrewsbury, Pa.
 Rodriguez, Manuel, Porto Rico
 Rohm, Robert Franklin, Carnegie, Pa.

Rosenberg, Benjamin, Brooklyn, N. Y.
 Rosenthal, Henrietta E., Baltimore
 Rozum, John Charles, Sloatsburg, N. Y.
 Schimunek, Emmanuel Aloysius, Baltimore
 Seabold, William Merven, Catonsville
 Seidman, Herman Harold, New York, N. Y.
 Shaw, Christopher Campbell, Baltimore
 Shelley, Harry Sandberg, Baltimore
 Shochat, Albert Joshua, New York, N. Y.
 Siwinski, Arthur George, Baltimore
 Skovron, Michael, Jr., Erie, Pa.

Wojcik, William Joseph, Baltimore

FRESHMAN CLASS

Abrashkin, Mortimer Dick, New Haven, Conn.

Ahroon, Carl Richard, Jr., Baltimore
 Alagia, Lucia Carmela, Elkton
 Ashman, Leon, Baltimore
 Beadenkopf, Anna Lucille, Baltimore
 Belford, Joseph, Baltimore
 Bell, Charles Ray, Jr., Lebanon, Pa.
 Bell, James Russell, Canonsburg, Pa.
 Bercovitz, Nathan, New York, N. Y.
 Berger, Herbert, Brooklyn, N. Y.
 Bielinski, Leon Bernard, Dickson, Pa.
 Blum, Samuel Daniel, New York, N. Y.
 Boger, William Jonas, Newton, N. C.
 Boggess, John Paul, Fairmont, W. Va.
 Bogorad, Dan Emil, Baltimore
 Brown, William Edward, Los Angeles, Cal.

Byer, Jacob, New York, N. Y.
 Cannon, Martin, Cleveland, Ohio
 Chimacoff, Hyman, Newark, N. J.
 Clayman, David Stanford, Baltimore
 Cooney, Joseph William, Wilkes-Barre, Pa.
 Corriere, Josef, Easton, Pa.
 Crecca, Anthony Daniel, Newark, N. J.
 Currie, Dwight McIver, Carthage, N. C.
 Davis, Carroll Kalman, Brooklyn, N. Y.
 Davolos, Joseph John, Wilmington, Del.
 Demarco, Salvatore Joseph, Baltimore
 Diamond, Joseph George, Long Branch, N. J.

Dumler, John Charles, Baltimore
 Easterday, Carroll Edward Lee, Union Bridge
 Eichert, Herbert, Woodlawn
 Eisenbrandt, William Henry, Mt. Washington

Elliott, Alice Winifred, Youngstown, Ohio
 Falk, Sigmund, New York, N. Y.
 Fein, Jack, Long Island, N. Y.
 Fishbein, Elliot, Paterson, N. J.
 Flom, Charles, Baltimore

Slate, Marvin Longworth, High Point, N. C.
 Slavcoff, Alexander, Grove City, Pa.
 Smith, Solomon, Baltimore
 Sprecher, Milford Harsh, Fairplay
 Sterling, Susanne, Crisfield
 Stevens, Russell Alvin, Wilkes-Barre, Pa.
 Taylor, Robert Bruce, Crafton, Pa.
 Van Ormer, William Alfred, Schellsburg, Pa.
 Warren, Edward William, Ithaca, N. Y.
 Wigderson, Henry, New York, N. Y.

France, Andrew Menaris, Hagerstown
 Ganz, S. Evans, Brooklyn, N. Y.
 Geller, Sam, Newark, N. J.
 Gershenson, David, Baltimore
 Girouard, Fernand Louis, Willimantic, Conn.
 Gittleman, Solomon Ellman, Brooklyn, N. Y.
 Glass, Albert Julius, Baltimore
 Gluckman, Albert Gerson, Wilmington, Del.
 Gorenberg, Harold, Jersey City, N. J.
 Grollman, Ellis, Baltimore
 Grosh, Joseph Walter, Lititz, Pa.
 Halperin, David, Jersey City, N. J.
 Hammell, Frank Mull, Trenton, N. J.
 Hanagan, John Joseph, Somersworth, N. H.
 Hantman, Irvin, Baltimore
 Harrington, Peter Francis, East Providence, R. I.

Harris, Jacob, Brooklyn, N. Y.
 Hecht, Manes Scheuer, Baltimore
 Hendler, Hyman Bernard, Baltimore
 Hull, Harry Clay, Jr., Frederick
 Jacobson, Meyer William, Baltimore
 Jones, Grace Germania, Baltimore
 Kaplan, Abraham Nathan, New York, N. Y.
 Karfgin, Arthur, Baltimore
 Katz, Abraham, New York, N. Y.
 Katz, Leonard, Baltimore
 Katzenstein, Lawrence, Baltimore
 Keiser, Sylvan, Brooklyn, N. Y.
 Kimmel, Charles, Newark, N. J.
 Kingsley, Alton Mason, Gillett, Pa.
 Klimes, Louis Frank, Baltimore
 Klingensmith, Frederic Chester, Jeannette, Pa.

Korostoff, Bernard, Brooklyn, N. Y.
 Kress, Milton Bernard, Baltimore
 Krieger, Alexander Allan, Pittsburgh, Pa.
 Kriete, Eduard William, Aberdeen
 Layne, Frank Hopkins, Prestonsburg, Ky.

Lechner, Sidney Israel, Bronx, N. Y.
 Lefkowitz, Jacob, Brooklyn, N. Y.
 Legum, Samuel, Baltimore
 Lent, Sylvester Mead, Greenwich, Conn.
 Lerner, George, Brooklyn, N. Y.
 Lieberman, Samuel, New York, N. Y.
 Louft, Reuben Richard, Hyattsville
 McCauley, Lewis Ross, Punxsutawney, Pa.
 McGovern, William Joseph, Carnegie, Pa.
 McMillan, William Owen, Charleston, W. Va.
 Markman, Harry David, New York, N. Y.
 Mickley, John Hoke, Gettysburg, Pa.
 Miller, Myron Joseph, New York, N. Y.
 Moores, John Duer, Finksburg
 Myers, George Thomas, Cumberland
 Myles, Harry Seig, Rainelle, W. Va.
 Nachlas, Arthur, Baltimore
 Newnam, Alpheus Carlton, Jr., Bellevue
 Panebianco, Richard Robert, Long Island, N. Y.
 Patterson, Robert Compton, Clarksburg, W. Va.
 Pear, Henry Robert, Baltimore
 Philip, Arthur Jay, Brooklyn, N. Y.
 Pink, Solomon Harris, Passaic, N. J.
 Posey, Charles Fry, York, Pa.
 Prigal, Samuel Jeremiah, New York, N. Y.
 Proctor, Samuel Edward, Cardiff
 Prussack, Sol, Bayonne, N. J.
 Reckson, Morris Murray, Brooklyn, N. Y.
 Richardson, Jack, Marlinton, W. Va.
 Roberto, Frank Paul, Baltimore

Roberts, Marion Butler, Hillsboro, N. C.
 Rohm, Jack Zeth, Carnegie, Pa.
 Rosenthal, Stephen Isaiah, Scranton, Pa.
 Ruben, William Merwin, Baltimore
 Rubenstein, Robert, Jersey City, N. J.
 Sager, Harold, Bayonne, N. J.
 Saunders, Thomas Sewell, Baltimore
 Savage, John Edward, Washington, D. C.
 Schnabel, William Thomas, Baltimore
 Schubart, George Rudolf, Wheeling, W. Va.
 Schwartz, David I., Baltimore
 Senger, Joseph Anton, Baltimore
 Shack, Max Herman, Springfield, N. J.
 Shaw, John Jacob, Newark, N. J.
 Siegel, Sidney Leon, Jersey City, N. J.
 Silverstein, George, Ansonia, Conn.
 Simmons, John Frederick, Cambridge
 Smoot, Marvin LeRoy, Fayetteville, N. C.
 Snyder, Jerome, Baltimore
 Sollod, Aaron Charles, Baltimore
 Spellman, Edward Thomas, Scranton, Pa.
 Statman, Arthur James, Newark, N. J.
 Stein, Charles, Baltimore
 Stephenson, Frank Richard, Baltimore
 Strully, Joseph George, New York, N. Y.
 Thomas, Robert Yates Haines, Jacksonville, Fla.
 Thompson, Harry Goff, Mt. Vernon, Ill.
 Widby, Jesse Howard, Wenatchee, Wash.
 Wirts, Carl Alexander, Pittsburgh, Pa.
 Young, Alexander, New York, N. Y.
 Zupnik, Howard Lester, New Freedom, Pa.
 Zuravin, Meyer Harry, Keyport, N. J.

SPECIAL

Ewing, Clinton Leroy, Baltimore

SCHOOL OF NURSING

SENIOR CLASS

Bradburn, Eva Mae, Spencer, N. C.
 Conner, Gertrude Nelson, Berlin
 Coulter, Mildred Malinda, Newton, N. C.
 Dick, Grace Eleanor, Lonaconing
 Emmert, Grace Mae, Washington, D. C.
 Esterly, Edna Alice, Frederick
 Fazenbaker, Freda Gertrude, Westernport
 Fite, Lida Jane, Dauphin, Pa.
 Fox, Maggie Milton, Sellman
 Gillies, Christina Baird, Jamaica, British West Indies.
 Goldsborough, Eleanor Editha, Romney, W. Va.
 Goodman, Hattie Goldie, Princess Anne
 Haddox, Evelyn Cathrine, Berkley Springs, W. Va.
 Hastings, Daisymae, Hurlock

McLaughlin, Gertrude Cecelia, Jacksonburg, W. Va.
 Miller, Corinne Bennett, Lonaconing
 Morgan, Edith Eugenia, Massies Mill, Va.
 Neikirk, Milbrey Catherine, Boonsboro
 Nelson, Margaret, Havre de Grace
 Ocheltree, Martha Marie, Weston, W. Va.
 Pifer, Martha Rebecca, Strasburg, Va.
 Pusey, Hannah Lula, Ocean City
 Rankin, Mildred Nancy, Madison, N. C.
 Ross, Verna Naomi, Barton
 Roth, Emma Elizabeth, Baltimore
 Shaw, Isabel Sittig, Taneytown
 Shipley, Mildred May, Sykesville
 Swartz, Vesta Lillian, Strasburg, Va.
 Thawley, Grace Liden, Hobbs
 Valaco, Dena Virginia, Baltimore

Vickers, Louise Dorothy, Federalsburg
Victor, Alberta Lillian, Baltimore
Wetzel, LaRue Koontz, Union Mills

Zapf, Evelyn, Baltimore

Willis, Hilda Dale, Bridgeton, N. C.
Wright, Kathryn Elizabeth, Camp Holabird
Young, Ruth Anna, Taneytown

INTERMEDIATE CLASS

Adkins, Gladys Blanche, Pittsville
Ayersman, Ethel Ellen, Rowlesburg, W. Va.
Baker, Dora Julia, Cumberland
Bradley, Alma Martin, Federalsburg
Brittain, Bernice Elizabeth, Federalsburg
Bulman, Mabel Hume, Wachapreague, Va.
Conner, Marie Elizabeth, Baltimore
Davis, Oscie Louise, Elizabeth City, N. C.
Dutterer, Grace Naomi, Westminster
Frothingham, Ruth Cecelia, Baltimore

Insley, Amanda Elizabeth, Cropo
Hutchinson, Lera Mae, White Stone, Va.
Laignell, Eva Ellen, Federalsburg
Lefler, Annie Adeline, Albemarle, N. C.
Reed, Mildred, Cambridge
Sheppard, Myrtle Lea, Bel Air
Tarun, Bertha Anna, Baltimore
Tilghman, Maude Ethel, Parsonsburg
Trice, Elizabeth Stevenson, Federalsburg
Ward, Ruth Caroline, Forest Hill

JUNIOR CLASS

Brown, Elizabeth Waters, Brookeville
Heritage, Elizabeth Virginia, Raleigh, N. C.

Martin, Louise Davis, Snow Hill
Mills, Mildred Viola, Sharpsburg

Wood, Hulda Vane, Hertford, N. C.

Nesbitt, Edith Helen, Baltimore
Noble, Lillian Charles, Federalsburg
Rodes, Luella Mildred, Manchester, Pa.
Soden, Leona Grace, Bicknell, Ind.
Williams, Josephine Virginia, Elkridge

PROBATIONERS

Albaugh, Mary Catherine, Lewiston
Bennett, Margaret Louise, North Tazewell, Va.

Bodmer, Doris Louise, Poolesville
Bolton, Dorothy May, Olney
Bond, Annie Irene, Hoya
Bruin, Catherine Anna, Baltimore
Click, Evelyn Ruth, Lonaconing
Conner, Evelyn Annette, Quitman, Ga.
Cox, Marie Olga, Homeville, Va.
Davis, Mary Edna, Berlin
Dennis, Elizabeth Bunbage, Newark
Ervin, Erma Irene, Keyser, W. Va.
Firor, Matilda Grace, Thurmont
Goodell, Margaret Jessie, Baltimore
Green, Beatrice Elizabeth, Chester, Pa.
Groomes, Margaret Boone, Brookeville
Hales, Edna Sallie, Snow Hill
Hall, Marion Claudia, Red Lion, Pa.

White, Rebecca Joyner, Bedford, Va.

Harman, Claris Null, New Martinsville, W. Va.
Helsby, Helen Roselyn, East New Market
Horsman, Florence Rowe, Bivalve
Langford, Elton Louise, Frostburg
Lilly, Emily Geneva, Bridgeton, N. C.
Michael, Carrie Rau, Berkeley Springs, W. Va.
Noll, Laura Virginia, New Martinsville, W. Va.
Phillips, Carrie Wendelle, Ocean City
Reiblich, Vivian Frances, Woodlawn
Roach, Rowena Georgia, Hagerstown
Ryman, Clara Annabelle, Bridgeton, N. C.
Sills, Elsie Haynes, Statesville, N. C.
Smith, Ardean Lucia, Red Lion, Pa.
Stauffer, Dorothy Bertha, Red Lion, Pa.
Toms, Josephine Annabelle, Myersville
Walker, Evelyn Rhodella, Delmar

PROBATIONERS—FEBRUARY 1, 1929

Bond, Gladys Isabelle, Ashton
Cameron, Blanche Virginia, Millville W. Va.
Compton, Ruth Jane, Sinks Grove, W. Va.
Gadinski, Amelia Mildred, Whitehouse, N. J.
Gallaher, Elizabeth Louise, Richardson Park, Del.
Harris, Bessie Kathryn, Albemarle, N. C.

Miller, Carrie Estella, Red Lion, Pa.
Miller, Ella Irene, Red Lion, Pa.
Peppler, Irene Juliet, Baltimore
Reifsnider, Janet Beryl, Keymar
Schaffer, Ruth Madeline, Hagerstown
Taylor, Arminta Eveline, Red Lion, Pa.
Thompson, Julia Weddington, Davidson, N. C.
Whistler, Mildred Belle, Broadway, Va.

SCHOOL OF PHARMACY

GRADUATE STUDENTS

Andrews, Marvin J., Baltimore

Bauer, John Conrad, Baltimore

Slama, Frank James, Baltimore

FOURTH YEAR CLASS

Christ, Frank Picha, Hughesville
Dembeck, Walter Daniel, Baltimore
Goldstein, Samuel William, Baltimore
Levine, Vincent Charles, Baltimore
Lesser, Abraham D., Baltimore

Manchey, L. Lavan, Glen Rock, Pa.
Millett, Joseph, Pen-Mar
Racusin, Nathan, Baltimore
Sachs, Abraham, Baltimore
Settler, Myer Martin, Baltimore

Shulman, Emanuel Veritus, Baltimore

THIRD YEAR CLASS

Abelson, Abraham Albert, Baltimore
Ansell, Max S., Baltimore
Baylus, Joseph, Baltimore
Becker, Samuel, Baltimore
Benedetti, Roberto Augusto, Panama
Bernhardt, William, Baltimore
Block, Michael, Baltimore
Brickman, Hilliard, Baltimore
Carliner, Paul Elliott, Baltimore
Cohen, Isador Meyer, Baltimore
Cohen, Joseph, Baltimore
Cwalina, Gustav Edward, Baltimore
Deal, Justin, Cumberland
Eason, Frederick Becker, Baltimore
Eisman, Morris Jacob, Baltimore
Fineman, Jerome, Baltimore
Gawthrop, Alfred Jefferson, Baltimore
Gildea, William Joseph, Aberdeen
Ginsburg, Ben Herman, Baltimore
Gluck, Julius, Brooklyn, N. Y.
Goldin, Harold Herbert, Richmond, Va.
Goldstein, Albert, Baltimore
Greenberg, Harry Lee, Baltimore
Greenfeld, Jacob Herbert, Baltimore
Greif, Daniel, Baltimore
Greif, Julius, Baltimore
Grove, Donald, Baltimore
Gutman, Isaac, Baltimore
Hack, Morris Benjamin, Baltimore
Highstein, Gustav, Baltimore
Ichniowski, Casimer Thaddeus, Baltimore
Jacobs, Corinne Harriet, Newport News, Va.
Kaplan, Sigmund, Baltimore
Kappelman, LeRoy F., Baltimore
Karlinsky, David, Baltimore
Karpa, Maurice, Baltimore
Kaufman, Stanley Louis, Baltimore
Kerpelman, Isaac Earl, Baltimore
Kramer, Charles, Baltimore
Kroopnick, Frieda Ruth, Baltimore

Kurland, Louis John, Baltimore
Kurtzwile, Hymen Louis, Baltimore
Lazzaro, Samuel Frank, Baltimore
Leboff, Sol, Baltimore
Levin, Morris, Baltimore
Levin, Sam Barry, Baltimore
Levin, Theodore, Baltimore
Levy, Abraham Maurice, Baltimore
Liptz, Alvin, Baltimore
McNally, Hugh Bernard, Baltimore
Malinoski, Wallace Henry, Baltimore
Meeth, George Raymond, Baltimore
Miller, Lewis, Baltimore
Morgan, Alfred Kirke, Baltimore
O'Connor, Rita Frances, Cumberland
Pagenhardt, Arthur Ewing, Baltimore
Pasco, Louis Eduard, Baltimore
Pearrell, Ernest Herring, Reisterstown
Pollekoff, Jack, Baltimore
Poltilove, Harvey Gabriel, Baltimore
Provenza, Stephen John, Baltimore
Reichert, Leroy Dowling, Overlea
Roberts, Bertran, Westernport
Roberts, William Philip, Baltimore
Rodowskas, Christopher Anthony, Baltimore
Rosenberg, Milton Bernard, Baltimore
Rosenblatt, Sydney, Baltimore
Rubin, Maurice Morton, Baltimore
Rubin, Samuel S., Baltimore
Rudo, Herbert Bernard, Baltimore
Sapperstein, Jacob, Baltimore
Schapiro, Samuel, Baltimore
Schochet, George, Baltimore
Schonfeld, Paul, Baltimore
Schwartz, Paul, Baltimore
Sealfon, Irwin Israel, Baltimore
Silverman, Paul, Baltimore
Silverman, Sylvan Bernard, Baltimore
Singer, Isidore E., Baltimore
Slusky, Louis Bernard, Atlantic City, N. J.

Spigelmire, Charles Edgar, Jr., Sparrows Point
 Stein, Milton Robert, Baltimore
 Szczepkowski, Irene Ursula, Union City, Conn.

SECOND YEAR CLASS

Abelson, Bernard, Baltimore
 Archambault, Paul Joseph, McIntosh, S. D.
 Baker, William, Baltimore
 Bayley, John Sharpley, Baltimore
 Benick, Carroll Richard, Baltimore
 Bernstein, Nathan, Baltimore
 Blumberg, Ely, Baltimore
 Buppert, Hobart Charles, Baltimore
 Caplan, Milton, Baltimore
 Carmel, Joseph, Baltimore
 Caton, Franklin Walter, Hagerstown
 Chandler, Nehemiah Wallop, Ocean City
 Chupnick, David, Baltimore
 Cohen, Harry Jacob, Baltimore
 Cohen, Lawrence Jay, Baltimore
 Cornblatt, Edmund Adam, Baltimore
 Dalinsky, Harry, Baltimore
 Davidson, Nachman, Baltimore
 DeDominicis, Amelia, Baltimore
 Diener, Samuel, Baltimore
 Downs, Grant, Jr., Baltimore
 Dyott, William Heller, Baltimore
 Eagle, Philip T., Baltimore
 Edelstein, Joseph Horace, Baltimore
 Elson, Norman W., New York, N. Y.
 Feldman, Leon Henry, Baltimore
 Fineman, Elliott, Baltimore
 Fisher, Arthur, Baltimore
 Fisher, Joel, Baltimore
 Foley, William Thomas, Havre de Grace
 Forman, Robert R., Baltimore
 Friedman, Howard, Baltimore
 Fulton, Charles Thomas, Clarksburg, W. Va.
 Gaboff, Benjamin, Baltimore
 Geesey, Alton Luther, Spring Grove, Pa.
 Glick, Harry, Baltimore
 Goldstein, Sam Alvin, Baltimore
 Goldstone, Herbert Nathan, Baltimore
 Goodman, Daniel, Baltimore
 Goodman, Howard, Baltimore
 Gorban, Thomas, Baltimore
 Gordon, Joseph, Baltimore
 Gordon, Morris M., Baltimore
 Gresser, Isidor H., Baltimore
 Gum, Wilbur Harman, Jr., White Sulphur, W. Va.
 Harris, Morris, Baltimore
 Helgert, Ernest, Baltimore
 Helman, Max M., Baltimore

Theodore, Raymond Marvin, Baltimore
 Weisman, Samuel, Baltimore
 Yaffe, Samuel Sidney, Baltimore
 Zervitz, Max Morton, Baltimore

Henderson, Edward Harold, Baltimore
 Hergenrather, Louis, III, Towson
 Homberg, Henry Irvin, Baltimore
 Horne, Peyton, Baltimore
 Hunter, Calvin Leroy, Dundalk
 Hurwitz, Abraham, Baltimore
 Itzoe, Leonard Valentine, New Freedom, Pa.
 Jaeggin, Richard Benjamin, Baltimore
 Jaffe, Bernard, Baltimore
 Kallinsky, Edward, Baltimore
 Karns, Hugh Hubert, Cumberland
 Kelman, Nathan Allen, Wallingford, Conn.
 Klein, B. Franklin, Jr., Baltimore
 Klimen, Samuel E., Baltimore
 Krakower, Jacob, Baltimore
 Kushner, Meyer, Baltimore
 Lagna, Ernest Louis, Baltimore
 Lalacoma, Felix, Corona, N. Y.
 Landsberg, J. Walter, Baltimore
 Lathroum, Reginald Tonry, Baltimore
 Lavin, Bernard, Baltimore
 Levin, Lester, Baltimore
 Levin, Milton, Baltimore
 Meyers, Carl Jording, Baltimore
 Milan, Joseph S., Baltimore
 Miller, Harry, Baltimore
 Miller, Irving Walton, Baltimore
 Miller, Nathaniel Arnold, Baltimore
 Mitchell, Joseph Paul, Baltimore
 Mund, Maxwell Hershel, Baltimore
 Narunsky, Reuben, Baltimore
 Neumann, Walter Paul, Overlea
 Niznik, Theodore Thaddeus, Baltimore
 Owens, Randall Mather, Salisbury
 Packett, William Harold, Warsaw, Va.
 Petts, George Edward, Jr., Baltimore
 Pinsky, Herman Hyman, Baltimore
 Purdum, William Arthur, Baltimore
 Raffel, Leon, Baltimore
 Richmond, Samuel, Baltimore
 Rodbell, Theodore Ellis, Baltimore
 Rosenberg, Bernard R., Baltimore
 Rudie, Harry, Baltimore
 Rudo, Nathan, Baltimore
 Ruth, Stephen Waiter, Baltimore
 Sacks, Milton Samuel, Baltimore
 Sager, Bennie J., Front Royal, Va.
 Schapiro, Abraham Benjamin, Baltimore
 Schwartz, Daniel James, Baltimore

Schwartz, Theodore Allison, Baltimore
 Seidman, Henry George, Baltimore
 Shaughnessy, Grace Evelyn, Emmitsburg
 Shivers, Mildred Louise, Baltimore
 Shure, Arthur Alvin, Baltimore
 Singer, George Donald, Baltimore
 Siscovick, Milton, Baltimore
 Spain, Mary Ellen, Emmitsburg
 Standiford, Isaac Willard, Fallston
 Steinberg, Bernard, Baltimore
 Zilber, Samuel Nathan, Baltimore

FIRST YEAR CLASS

Alessi, Edward James, Baltimore
 Arenson, Phil, Baltimore
 Austraw, Richard Freeman, Dundalk
 Barke, David Stanley, Baltimore
 Batalion, Abraham Louis, Baltimore
 Battaglia, Joseph John, Baltimore
 Bearman, Joshua, Baltimore
 Beitler, Ben, Baltimore
 Bennett, Lester Leroy, Baltimore
 Berman, Frederic Theodore, Baltimore
 Bloom, Max, Annapolis
 Briele, Henry Alison, Baltimore
 Brulle, William M., Baltimore
 Brunnett, William Lester, Baltimore
 Brusowankin, Maurice, Baltimore
 Budacz, Julius Francis, Baltimore
 Cantor, Jessie, Baltimore
 Carton, Frieda, Baltimore
 Chayt, Edwin, Baltimore
 Clarke, Mary Carmel, Baltimore
 Cohen, Morris Gusdorff, Baltimore
 Cooley, William Ambrose, Havre de Grace
 Cotter, Edward Francis, Baltimore
 DeVouges, Francis Bernard, Jr., Laurel
 Diehl, Earl Henry, Baltimore
 Duiges, Frank Cameron, Edinburg, Va.
 Dunlop, James Robert, Baltimore
 Edmiston, Hamilton Michael, Easton
 Elsberg, Milton Leonard, Baltimore
 Feldman, David, Baltimore
 Feldman, Sidney, Baltimore
 Fink, Melvin James, Baltimore
 Fox, Lester Mitchell, Baltimore
 Friese, William J., Baltimore
 Garfinkel, Meyer, Baltimore
 Gilroy, William R., Baltimore
 Ginsberg, Benjamin, Baltimore
 Glassner, Frank, Baltimore
 Goldberg, Herman, Baltimore
 Goldblatt, Ben, Portsmouth, Va.
 Gordon, Charles, Baltimore
 Gordon, Samuel, Baltimore
 Gorfine, Bernard Maurice, Baltimore
 Grollman, Jacob Jay, Baltimore

Susel, Benjamin Edward, Baltimore
 Svarovsky, John William, Baltimore
 Weiner, Martin, Baltimore
 Weinstein, Jack Joseph, Baltimore
 Wharton, John Charles, St. Michaels
 Wilder, Earle Maurice, Glyndon
 Wilson, John Jacob, Brooklyn
 Wolfowitz, Samuel, Baltimore
 Wright, Thomas Gorsuch, Baltimore
 Zerofsky, Frank, Baltimore

Gross, Joseph Bernard, Baltimore
 Grossman, Bernard, Caldwell, N. J.
 Grothaus, David Benton, Jr., Baltimore
 Harris, Aaron, Baltimore
 Hearn, Clifford Burton, Baltimore
 Heck, Andrew, Jr., Baltimore
 Heck, John Conrad, Baltimore
 Heer, Melvin Lentz, Baltimore
 Heghinian, Jeannette Rosaline, Baltimore
 Henderson, Marvin Webb, White Hall
 Hens, Louis Leonard, Baltimore
 Hettleman, Janet Ruth, Baltimore
 Highstein, Benjamin, Baltimore
 Holtgreve, Karl Harry, Baltimore
 Hulla, Joseph James, Baltimore
 Hunt, William Howard, Baltimore
 Hyman, Paul, Baltimore
 Illberg, Peter L. Worcester, Mass.
 Janousky, Nathan Bonny, Baltimore
 Joffe, Albert, Baltimore
 Johnson, Brooks Matthews, Parksley, Va.
 Kairis, Nancy Emily, Baltimore
 Kahn, Leon, Jersey City, N. J.
 Karwacki, William Stanley, Jr., Baltimore
 Katz, Joseph, Baltimore
 Kesmodel, Charles Raymond, Baltimore
 Kirson, Walter, Baltimore
 Klavens, Elmer, Baltimore
 Kreis, Elizabeth Edna, Baltimore
 Kupfer, Alexander, Baltimore
 Ladensky, William, Baltimore
 Land, Leon Erwin, Baltimore
 Levin, Harold Joseph, Baltimore
 Levin, Max, Baltimore
 Levin, Philip, Keller, Va.
 Levy, Morris, Baltimore
 Liberto, Joseph, Baltimore
 Libowitz, Aaron Myer, Baltimore
 Lipner, Sam, Baltimore
 Lyon, Leon Bernard, Hagerstown
 McGinnis, David Franklin, Randallstown
 McTeague, Charles Joseph, Baltimore
 Manley, John Michael, Dundalk
 Marek, Anton Charles, Baltimore

Marek, Charles Bernard, Baltimore
 Matassa, Salvatore Joseph, Baltimore
 Matthews, Alfred Thomas, Parksley, Va.
 Melin, Thomas William, Baltimore
 Mendelson, Herman, Baltimore
 Michel, John Vernon, Baltimore
 Millett, Sylvia, Pen-Mar
 Mislér, Samuel, Baltimore
 Molinari, Salvatore, Baltimore
 Morstein, Raymond Milton, Baltimore
 Moscati, Marius Anthony, Baltimore
 Moses, Benjamin Bernard, Baltimore
 Naiditch, Morton Elliot, Baltimore
 Neistadt, Herman M., Baltimore
 Newman, Leon M., Baltimore
 Nusbaum, Clement Isadore, Baltimore
 Oken, Louis Edward, Baltimore
 Ordecki, Anthony Victor, Elizabeth, N. J.
 Parlett, George Dawson, Baltimore
 Pasovsky, Isadore Jaile, Baltimore
 Pelovitz, Nathan Gedaliah, Baltimore
 Peters, Albertus Budd, Collingswood, N. J.
 Pfeifer, Charles Michael, Baltimore
 Porterfield, William Elsworth, Baltimore
 Richmond, Jerome, Baltimore
 Robertson, John E., Baltimore
 Robinson, Harry Maximilian, Jr.,
 Baltimore
 Rodriguez, Sara, Porto Rico
 Rostov, Samuel Joseph, Baltimore

Rubin, Sylvan Isadore, Baltimore
 Sacks, Aaron Maxwell, Norfolk, Va.
 Savage, Walter Thomas, Ocean City
 Schmalzer, Dorothy Elizabeth, Baltimore
 Schmitt, George Frederick, Jr., Baltimore
 Schulte, Charles John, Baltimore
 Scoll, Lea, Newport News, Va.
 Scott, Virginia Patricia, Annapolis
 Shenker, Arthur, Baltimore
 Sherman, Louis Lazar, Baltimore
 Shinkowitz, Alfred Hyman, Newport News,
 Va.
 Shoben, Gerald, Baltimore
 Sollod, Herbert Samuel, Baltimore
 Spellman, Mary Rita, Baltimore
 Smulovitz, David, Baltimore
 Stiffman, George Josef, Baltimore
 Stimek, Joseph Albert, Baltimore
 Thayer, Franklin Edmondson, Baltimore
 Thiermann, Thomas Flemming, Jr.,
 Baltimore
 Tourkin, David, Baltimore
 Tralinsky, Julius J., Baltimore
 Treppe, Charles P., Baltimore
 Wode, Alvin Eugene, Baltimore
 Wolf, Nathan, Baltimore
 Wollman, Joseph I., Baltimore
 Yankeloff, Louis, Baltimore
 Young, Charles Louis, Baltimore
 Zolenas, Anthony John, Jr., Baltimore

SPECIAL STUDENTS

Austraw, Henry Harrison, Dundalk
 Bayer, Ira Eugene, Jr., Baltimore
 Croll, Mildred Marie, Federalsburg
 Hecker, Nathan, Baltimore
 Schmidt, George M., Baltimore

Marks, Sydney Isadore, Baltimore
 Mendell, James, Baltimore
 Paulson, Moses, Baltimore
 Pierson, Bernice Frances, Hyattsville

THE SUMMER SCHOOL—1928

Aaronson, Virginia J., Aberdeen
 *Adam, Lawrence W., Delphos, O.
 *Adams, Herbert F., Montross, Va.
 Adsuar, Jose E., Guaynabo, P. R.
 Alagia, Lucia C., Elkton
 Alband, Jo D., Silver Spring
 Albin, William D., Rohrsersville
 Albrittain, Maria L., La Plata
 Allen, Susie R., Prospect, Va.
 *Allred, Anne L., Cumberland
 Anderson, Mildred H., Washington, D. C.
 *Andrews, Marvin J., Baltimore
 Arnold, Julia C., Brentwood
 Atkinson, Ruth M., Lonaconing
 Ayres, Albert L., College Park

Ayers, Wanetta, Cumberland
 Bachtell, Eva H., Cavetown
 Baden, Clara G., Brandywine
 Baden, Elizabeth L., Baden
 Bailey, Pauline B., Queenstown
 Baker, William A., Mt. Airy
 Bates, Byrtle Y., Damascus
 *Bauer, John C., Baltimore
 Beall, Susie C., Beltsville
 Bear, Elizabeth H., Riverdale
 *Beavens, Elmer A., Washington, D. C.
 Beck, Alma K., Davidsonville
 Bennett, Bertha M., Upper Marlboro
 *Bennett, Dill G., Sharptown
 Bennett, William O., Princess Anne

*Denotes Graduate Students in Summer School

Billmeyer, Bruce R., Cumberland
 *Bishoff, G. Emerson, Grantsville
 Bishop, Ethel L., Poolesville
 *Bittinger, Mildred, Hagerstown
 Bixler, Evelyn T., Washington, D. C.
 Blake, Margaret D., Baltimore
 *Blandford, Josephine M., College Park
 Blenard, David C., Hagerstown
 Blickenstaff, Goldie M., Hagerstown
 *Blunt, Forrest P., Mardela Springs
 Bolton, Helen H., Washington, D. C.
 Bond, J. May, Union Bridge
 Bonneville, Jennie E., Pocomoke City
 *Boston, Josiah W., Berlin
 Boulden, Elizabeth A., Elkton
 *Bounds, Roger J., Allen
 Bowen, Henrietta D., Snow Hill
 Bowers, Arthur D., Hagerstown
 Bowman, Emma M., Mt. Airy
 Boyd, S. Malissa, Mt. Rainier
 Bradford, Viola W., Berlin
 Brain, Earl F., Frostburg
 Branford, Charles F., Princess Anne
 Bray, Harriet E., Hyattsville
 Brewer, Mary M., Rockville
 Brice, Anna S., Betterton
 Brice, Carrie J., Betterton
 Bricker, Kathryn M., Rockville
 Brooks, Alice B., Washington, D. C.
 Brooks, Florence B., Poolesville
 Brooks, Louise A., Federalsburg
 Brown, Emma K., Westminster
 Brown, Kathrine, Centreville
 Brown, Virgil L., Hagerstown
 Brunner, Mable V., Washington, D. C.
 Bryan, Carrie E., Baltimore
 Bryan, Clara H., Millington
 Bryan, Helen R., Washington, D. C.
 Buckingham, Hugh W., Washington, D. C.
 *Buckler, Milburn A., Prince Frederick
 Buffett, Dorothy E., Easton
 Bumstead, Robert, Washington, D. C.
 Burdette, Eunice E., Newburg
 *Burgee, Miel D., Monrovia
 Burgee, Ralph M., Monrovia
 Burgess, Alvin V., Selbysport
 Burley, Mary E., Washington, D. C.
 Burnside, Edna M., College Park
 Burroughs, George T., Upper Marlboro
 Cain, John H., Vale Summit
 Callahan, Lucinda A., Cordova
 Campbell, James A., Westernport
 Canter, Grace M., Hughesville
 *Carlson, Carl A., Crisfield
 Carrick, Mary A., Washington, D. C.
 Carrico, Charles C., Clinton
 Carroll, Louise, Bennettsville, S. C.

*Carter, John H., Washington, D. C.
 Carter, Mary J., Washington, D. C.
 Caruso, Amedeus J., Washington, D. C.
 *Castle, Francis M., Brownsville
 Chambers, Angela W., Lusby
 Chamblin, Margaret, Washington, D. C.
 *Chandlee, Elmer K., Smithsburg
 Chandler, Mirian T., Nanjemoy
 Charlton, Marion J., Williamsport
 Clagett, Lucy A., Washington, D. C.
 Clark, Geneva W., Silver Spring
 Clary, John G., Washington, D. C.
 Clendaniel, Zelda C., Lincoln, Del.
 Clift, Marion L., Washington, D. C.
 Coffin, Aralanta, Berlin
 Collins, Milton S., Berlin
 Combs, Rose M., Drayden
 Comer, Carl M., Frostburg
 *Compton, Vernon C., Westernport
 Connick, Aline E., Brandywine
 Connor, Ruth F., Washington, D. C.
 *Cooper, Luther A., Baltimore
 Cooper, Philip C., Salisbury
 Copeland, Rose, Brunswick
 Corbett, Violet E., Hancock
 *Cordner, Howard B., Provo, Utah
 Cowden, Helen E., Clear Spring
 Craig, Madie E., Brentwood
 Crain, Naomi V., Washington, D. C.
 Crane, Mary E., Harrington, Del.
 Croll, Mildred M., Federalsburg
 Cross, Janie A., Westwood
 Crothers, Omar D., Elkton
 Crowe, Katherine F., Cumberland
 *Culler, Pearl L., Frederick
 *Culley, Alfred E., Baltimore
 Currens, Ruthanna, Westminster
 Currie, Dora K., Washington, D. C.
 Custer, Paul Y., Grantsville
 Dalton, Alice M., Salisbury
 Dansberger, Catherine V., Frederick
 *Davis, Frank R., Jarrettsville
 Davis, Susie G., Poolesville
 Dean, Susie E., Elkton
 DeBoy, Dora F., Solomons
 *Degman, Elliott S., White Salmon, Wash.
 de la Torre, Carlos, Ecuador, S. A.
 DeRan, James J., Pylesville
 Derr, Lloyd H., Monrovia
 Devilbiss, Hilda M., New Midway
 *Devilbiss, Wilbur, Middletown
 *DeVol, Helen, Wasilla, Alaska
 Dewey, Viola, Ellicott City
 Dickerson, Mary G., Linwood
 *Diehl, William C., Clear Spring
 *Ditman, Lewis P., Westminster
 Dobyns, Elizabeth L., Oldhams, Va.

Dowell, Gertrude V., Sunderland
 Downey, Joseph T., Frostburg
 Downing, Amanda F., Hebron
 Downing, Anona, Naylor
 Doyle, Katherine G., Westminster
 Dryden, Ruth B., Snow Hill
 *Duffey, George L., Denton
 Dukes, Evelyn D., Secretary
 Dunnigan, Arthur, Pylesville
 Dyer, Marian C., Issue
 Dynes, Isabel, Chevy Chase
 Early, Angela D., Brandywine
 Early, Emily, Brandywine
 *Eckert, Evelyn V., Landover
 *Edmonds, Dorothy A., Norfolk, Va.
 Elliott, Elizabeth M., Delmar
 Elliott, Ethel R., Sharptown
 Elliott, Sarah V., Laurel
 *Endslow, Joseph S., Bel Air
 Epstein, Herman, Centreville
 *Essex, Alma F., Lanham
 Etzler, Mary A., Libertytown
 *Evans, Jesse D., Crisfield
 Evans, Louise M., Snow Hill
 Eyler, Beulah C., Cumberland
 *Fadely, Sidney H., Millersville
 Farrow, Nora D., Clear Spring
 Favorite, Ada C., Thurmont
 *Feaga, Ruth E., Lime Kiln
 Fellows, Paul D., Washington, D. C.
 *Ferguson, Lilly O., Cecilton
 Ferguson, Mary A., Cecilton
 Fiorucci, Louis C., Baltimore
 Firey, Joseph P., Clear Spring
 *Fisher, John W., Westernport
 Fisher, William A., Baltimore
 Fletcher, William, Washington, D. C.
 Flory, Maurice P., Harman
 *Floyd, Rudolph S., Indian Head
 Foehl, Marie E., Washington, D. C.
 Ford, Alverda L., Cumberland
 Ford, Mabel Rose, Rockville
 Forshee, Edith D., Washington, D. C.
 Foster, Evelyn D., Washington, D. C.
 *Foster, James J., Parkton
 Fourier, Mary V., Washington, D. C.
 France, Mazie A., Hagerstown
 Frantz, Mildred M., Clearspring
 Freeman, Carrie, Miletus, W. Va.
 French, Doris, Brentwood
 Fricker, Blanche J., Washington, D. C.
 Gardiner, Genevieve M., Indian Head
 Garner, Mary E., Seabrook
 Geary, Honora R., Lonaconing
 George, Hugh S., Hagerstown
 Getty, Frank J., Grantsville
 Gibbons, Maud, Croom

Gerbode, Elsa J., Baltimore
 Gibson, Margaret H., Washington, D. C.
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 Giles, Ercelle P., Chatham, Va.
 Gingell, Helen V., Berwyn
 Glass, Maryvee, Riverdale
 *Glenn, W. J., Smithsburg
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 Glover, Coella J., Takoma Park, D. C.
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 Gotee, Mary V., East New Market
 Gosnell, Ruth B., Woodbine
 Gough, Katharine L., Laurel
 *Graham, William C., North East
 Gray, Nellie K., Sabillasville
 Green, Mary O., Boyds
 Greene, Elsie M., Monrovia
 *Greenwell, James C., Britton
 Greenlaw, Irving R., Ridgewood, N. J.
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 Griffin, Kathryn L., Norfolk, Va.
 Grimes, Ida K., Williamsport
 Grimes, Maye E., Woodbine
 *Grindle, John E., Lonaconing
 Guyton, Homer W., Jefferson
 Hackett, Thomas P., Queen Anne
 Hall, Annie L., Glenndale
 Hall, Harvey B., Bowie
 *Hall, Ruth N., Bowie
 *Halverson, Henrietta R., Laurel
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 Hammel, John C., Baltimore
 Hammond, Ruth A., Frederick
 Hanna, Mary G., Westernport
 Hannon, Loretto, Frostburg
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 Harris, Virginia M., Snow Hill
 Harris, Walter G., Washington, D. C.
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 Hazell, Martha G., Millington
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 Helser, Mary E., Clear Spring
 Henderson, Eleanor B., Cumberland
 Henderson, Helen, Washington, D. C.
 Hendrickson, George O., Frederick
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*Henerey, William T., Sedalia, S. C.
 Henry, Margaret C., Berlin
 *Henson, Paul R., McCloud, Okla.
 *Hepbron, Louise I., Betterton
 *Herd, Robert L., Washburn, Mo.
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 *Hesse, Florence C., Smithsburg
 Heward, Lillie, Snow Hill
 Heylmun, Stanley L., Baltimore
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 Hicks, Early R., Hagerstown
 Higgins, Homer S., Vale Summit
 Higgins, Mabel L., Vale Summit
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 Hobbs, Genevieve L., Laurel
 Hoffa, Estelle, Barton
 Hoffman, John C., Adamstown
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 Holloway, Francis L., Hebron
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 Hopkins, Betty M., Cordova
 Horner, William E., Monie
 Hough, Georgie E., Boyds
 House, Bolton M., College Park
 *Houser, Phyllis M., Brentwood
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 Hoyle, Anne M., Chestertown
 Hudson, Yola V., Cumberland
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 Hughes, Harry R., Ammendale
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 *Webster, Ethel T., Hancock
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 *Wolf, Margret M., Hyattsville
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 Wolfinger, Mary L., Hagerstown
 Wood, Helen L., Washington, D. C.
 Wooten, Eunice H., Laurel
 Wright, Guy L., Frostburg
 Wright, Sara E., Frostburg
 Wright, Hannah E., Eckhart Mines
 *York, Mary S., College Park
 *Young, Agnes, Omega, Okla.
 Young, Elsa V., Prince Frederick
 Young, George B., Clear Spring

* Denotes Graduate Students in Summer School.

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**Any further information desired concerning the University
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